The Executive Resource for Doing Business on the Net

WEBMASTER

$4.95

August 1997

The 50/50

50 intranet & 50 Internet sites that are making a business difference for their creators

INTRANET SITE
GE Capital's
John McKinley Jr.
PAGE 36

INTERNET SITE
Rosenbluth's
Susan Steinbrink
PAGE 28

Measured in years, the business Web may still be a toddler. But, as this SPECIAL ISSUE demonstrates, at least 100 sites show signs of a mature sophistication

AN INTERNATIONAL DATA GROUP PUBLICATION

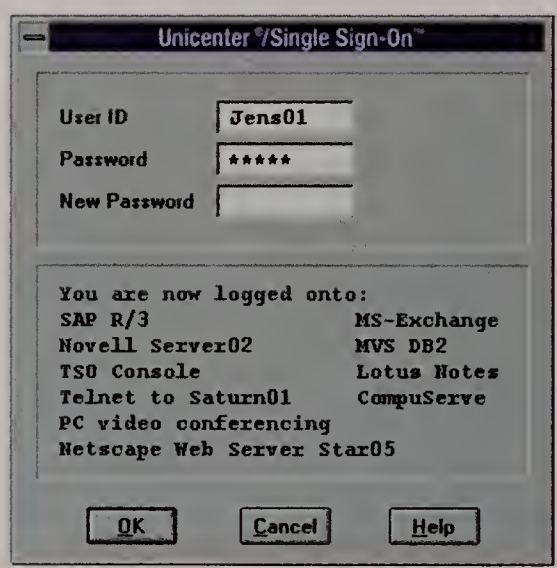
Our Software
Corporate
All Our Competi

More clients — including 462 of the Fortune 500 — trust CA security software than all the partial, proprietary solutions offered by IBM/Tivoli, Platinum and Boole & Babbage.

CA Security Software Is #1.

CA holds more security "firsts" than any other vendor. CA was the first to secure IBM's DB2 platform (two years before IBM). CA was the first to identify and address all the security risks of UNIX and NT. And with the introduction of ICE (Internet Commerce Enabled™), CA is the first to make it safe to do business on the Internet.

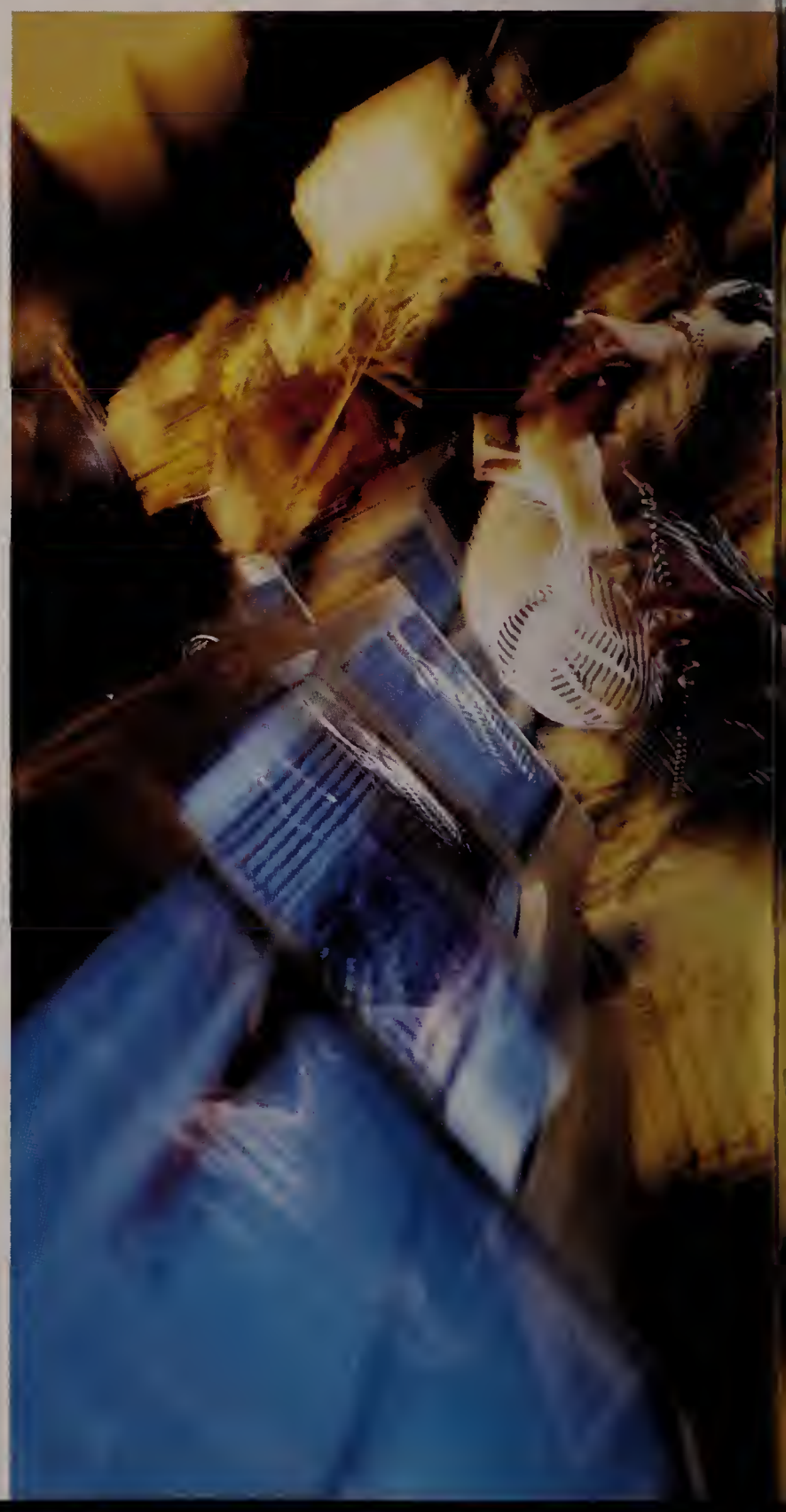
Unicenter TNG Is The Industry Standard For Network And Systems Management.



Single Sign-On lets users use one password and sign on once for every platform.

Unicenter® TNG™ offers the only integrated solution for true end-to-end enterprise management. With support for every major hardware platform and operating system, Unicenter TNG is open, scalable, extensible and 100% vendor-neutral. In addition, Unicenter TNG offers all kinds of powerful and exciting new features like a real-world, 3-D interface with virtual reality, Business Process Views™ and advanced agent technology.

No other management software offers anything like it.



Secures More Data Than tors Combined.

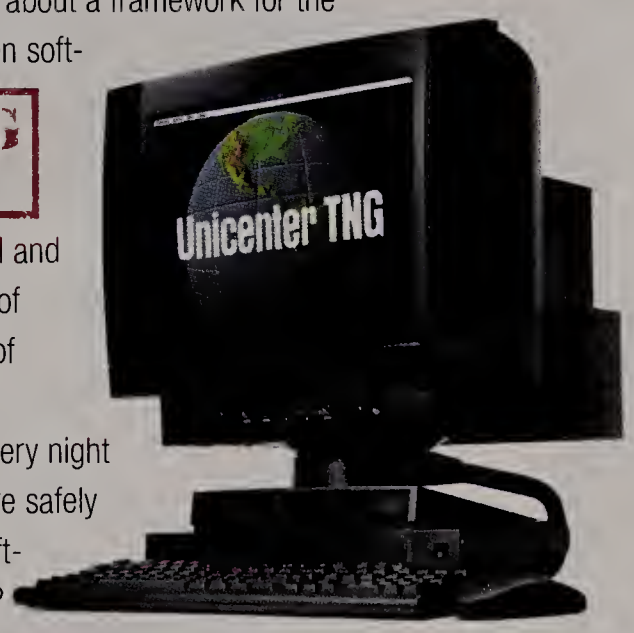
- Consistent Look/Feel Across Platforms
- Central & Localized Security Controls
- Full Audit & Control of OS Supervisor Functions
- Complete Access Controls
- Policy-Based Access Controls
- Multi-Platform Single Sign-On
- Enterprise-Wide Security Event Monitoring
- 2D, 3D & Web User Interface
- NT Workstation for Legacy Security Controls
- Secure and Manage Every IT Security Resource
- Focal-Point Security Administration
- Integrated Functions Built on Common Objects & Services
- Open Connectivity to Existing Systems and Applications
- Centrally View Any Security Event That Occurs Anywhere in the Enterprise
- Propagate Security Events from the C/S and Mainframe or Midrange Environments
- Extended Security Controls
- Windows-Based Administration
- Advanced Auditing/Reporting/Monitoring Cross-Platform

The Best Feature Of All Is Unicenter TNG Is Shipping Today.

While our competitors are talking about a framework for the "future," Unicenter TNG is a proven software solution that's available today. It's real, it's mission-critical and it's up and running in thousands of sites around the world for some of the smartest clients in the world.

SHIPPING TODAY

Our clients sleep soundly every night knowing that all their IT assets are safely protected by the best security software in the world. Shouldn't you?



For More Information Call 1-888-864-2368 Or Visit www.cai.com

COMPUTER® ASSOCIATES
Software superior by design.

Unicenter® TNG™

©1997 Computer Associates International, Inc. Islandia, NY 11788-7000. All other product names referenced herein are trademarks of their respective companies

WEBMASTER®

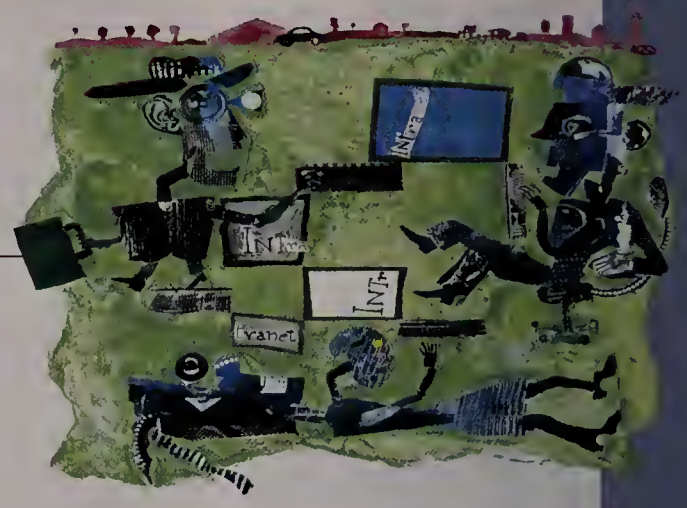
August 1997
VOLUME 2, NUMBER 2

FEATURES

Superior Interiors

18

▼ Three years ago, intranets like these didn't exist. Now, tens of thousands of people can't imagine working without them.
By Lew McCreary



The Best and the Busiest

24

▼ The real champions of the WebMaster 50/50 are sites that look good and work hard.
By Leigh Buchanan

Going Places

28

▼ Rosenbluth International has long had a reputation for using technology well. Now everyone can see why.
By Cheryl Dahle

Capital Gains

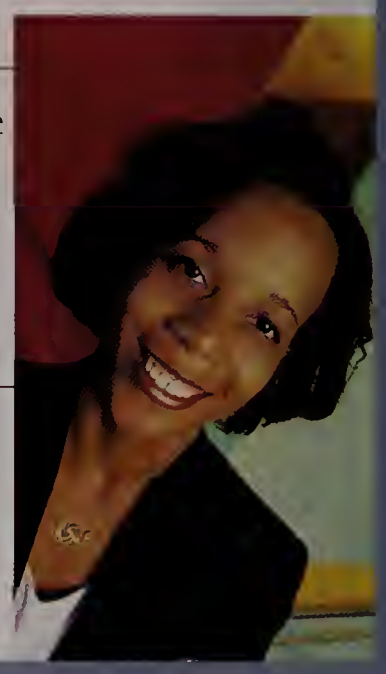
36

▼ A prize-winning intranet moves GE Capital toward its ideal "boundaryless" workplace.
By Jennifer Bresnahan

Inner Beauties

42

▼ Every intranet honored in the WebMaster 50/50 saves time. Most save money. A few save lives. Here are the winners and a few revealing snapshots of intranet efforts that give far more than they take.



World Wide Winners

52

▼ What can you do with an Internet site? Just about anything. The hard part is doing it as well as these WebMaster 50/50 honorees. Plus, a look under the hoods of a half-dozen winning sites.

Your Intranet.
As easy as pushing a button.

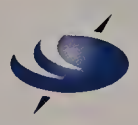
Today, more and more companies are beginning to understand that the Internet and Intranets can improve their business. You want easy, trouble-free solutions—from a proven company—that take advantage of your existing infrastructure. Together, USWeb and Microsoft are dedicated to one goal: bringing the highest level of our combined experience in technology and solutions to give your business a competitive advantage.

USWeb is a leading international company that provides businesses with comprehensive consulting and Internet and Intranet development services. USWeb builds and deploys business-critical application solutions that can improve marketing, customer service and support, human resources, manufacturing and operations automation.

Microsoft's expertise in Web technologies is well known, including its robust ActiveX platform that provides scalable, mission-critical applications that can be integrated with your existing applications.

To activate the Web for your business, call us at ***1-888-USWEB-411, ext. 350****, or visit our Web site at* ***www.usweb.com/ms****.*

Microsoft®

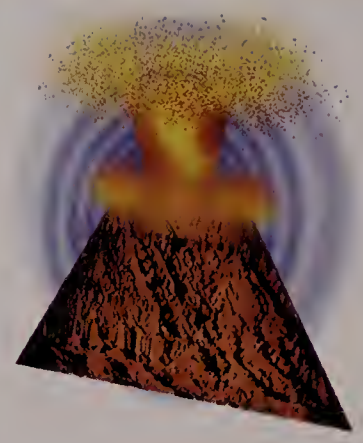


U S W E B™

Activating the Web for your business.™

© 1997 USWeb Corporation. USWeb and "Activating the Web for your business" are trademarks of USWeb Corporation. Microsoft and ActiveX are registered trademarks of Microsoft Corporation.

DEPARTMENTS



Threads 6

- ▼ The Sky Is the Limit
- ▼ Winning by a Landslide
- ▼ Professional Help
- ▼ Even the Score
- ▼ Keys to a Kingdom
- ▼ Southern Exposure

Closing Page 62

- ▼ Really Flexible Business Models

Index 64

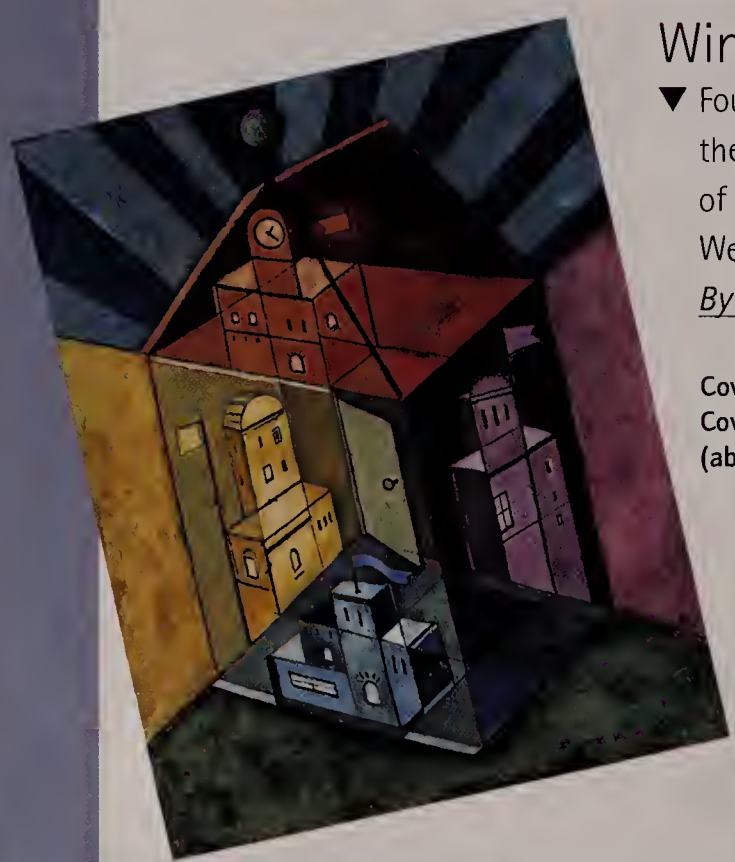
COLUMN

Customer Interface 14

Winning Glances

▼ Four great sites mark the four corners of the house the Web built.

By Jim Sterne



Cover image by Gerard Huerta
Cover photos by Paul McGuirk (above) and John Rae (below)

WEBMASTER

©BY CIO COMMUNICATIONS, INC.

President and Group Publisher JOSEPH L. LEVY
Editor in Chief and Publisher LEW MCCREARY

Executive Editor LEIGH BUCHANAN
Art Director LISA PUCCIO
Managing Editor ANNE STUART
Senior Editor ALICE DRAGOON
Senior Editor CAROL HILDEBRAND
Senior Editor ART JAHNKE
Senior Editor CHRISTOPHER KOCH
Associate Editor ELAINE M. CUMMINGS
Associate Editor CHERYL DAHLE
Associate Editor PERRY GLASSER
Associate Editor SARA SHAY
Associate Editor, Web and Print MEGAN SANTOSUS
Copy Chief CHERYL R. ASSELIN
Copy Editor HEATH ROW
Copy Editor SHEILA NEYLON
Senior Writer MINDY BLODGETT
Senior Writer JENNIFER BRESNAHAN
Senior Writer TOM FIELD
Staff Writer PETER FABRIS
Staff Writer ALEX FRANKEL
Staff Writer DEREK SLATER
Group Director, Art and Design MARY LESTER
Associate Art Director MICHAEL SIGGINS
Senior Graphic Designer HANA BARKER
Senior Graphic Designer LINDA GOLON
Graphic Designer TERRI MITCHELL
Graphic Designer STEVEN P. TRAYNOR
Associate Graphic Designer ROBIN M. BELLIVEAU
Editorial Researcher CAROL ZARROW
Editorial Assistant RUTH GREENBERG
Editorial Assistant THOMAS G. WAILGUM
Administrative Assistant LISA JAYNE KERBER

Contributing Editors ABBIE LUNDBERG, RICHARD PASTORE

Contributing Writer JIM STERNE

VP/Marketing CATHY O'LEARY HAYES
VP/Production LORI BETH SADEWITZ
VP/Finance and Admin. WALTER MANNINEN
VP/Circulation CAROL A. SPACH
Chief Information Officer BRUCE M. FRIEDMAN
VP/Technology and Webmaster TIM HORGAN
Web Developer LEE WEINER
Web Developer DAGMAR EIBEN
Web intern KATHLEEN KOTWICA
Manager, Network Services JAMES BURGOYNE
Supervising Sr. IS Specialist CARRYL BLAKEMORE
Assistant to the Publisher DIANE MARTIN
Office Specialist CARA KELLEY
Fulfillment Manager SUSAN WOODWORTH
Production Manager RESA ALTSHER
Ad Traffic Coordinator LYNNE ZOURANJIAN
Marketing Comm. Manager MARCY L. DILL
Research Manager BRIDGET CAMMARATA
Director, Marketing Programs LISA BROWN
Director, Public Relations SUSAN WATSON
Trade Show Coordinator DOT CASPERSEN
Subscription Svcs. Manager DENISE PERREAULT
Circulation Assistant TINA PESCARO
Billing Supervisor LYNN J. PALMQUIST
Financial Analyst CHAD MARSTON
Accounting Specialist KERRY GRADY
Marketing Comm. Specialist KAREN FOGERTY
Research Specialist CAROLINE CERULLO
Senior VP/Exec. Programs LYNDA ROSENTHAL
Director, Program Planning SUSAN T. MONTGOMERY
Manager, Program Development ROBIN L. AZAR
Manager, Program Operations CYNTHIA LAIRD
Mgr., Program Mktg. Comm. SARA A. EVANGELDUS
Program Mktg. Coordinator JEREMY E. DRAPER
Technical Admin. Specialist LIZ HECHT
Administrator, Exec. Programs MICHAEL MCPHEE
Administrative Assistant SANDRA J. HUGHEY
Program Traffic Admin. BRIAN FUCE
Data Coordinator HEATHER BEAUTON
Manager, Ancillary Products BILL KERBER

Editorial Offices CIO Communications, Inc.
492 Old Connecticut Path, P.O. Box 9208, Framingham, Mass. 01701-9208
(508) 872-0080, FAX (508) 879-7784. Printed in the U.S.A.
Subscriber Services (800) 788-4605, FAX (508) 879-7899
List Services (800) 859-LIST

BPA INTERNATIONAL®
IDG INTERNATIONAL DATA GROUP

Your Web site is your face to the world.

Get Serious.

Web Hosting is serious business. Which is why companies who are committed to the Internet come to UUNET as a dynamic single point of contact for innovative and comprehensive Web Hosting solutions.

Since 1987 (a lifetime in Internet terms), UUNET has been at the forefront of shaping the Internet into a seamless business communications tool. And in 1994 UUNET became the first national Internet Service Provider to offer business-class Web Hosting services.

UUNET's services range from basic UNIX and NT hosting to large-scale database services—all connected to UUNET's fully-redundant global backbone. Because let's face it, your Web site isn't kid's stuff.

At UUNET, the Internet isn't a toy. We take it seriously—because we know that you do.

UUNET Web Hosting Services. The Internet at Work.™

1-800-874-5209 / www.uu.net/serious/wm

UUNET

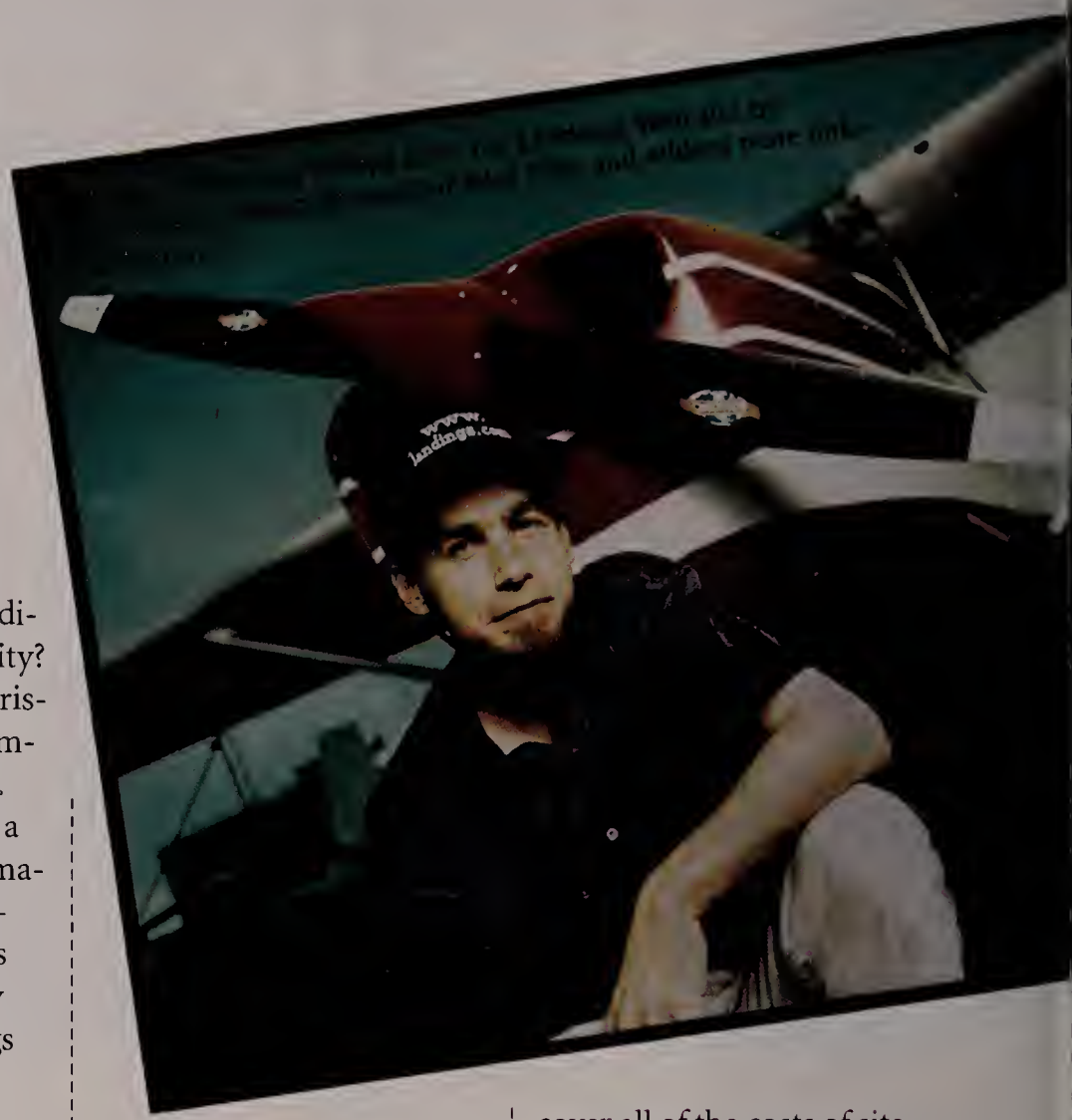
©1997 UUNET Technologies, Inc., Fairfax, VA. All rights reserved. UUNET is a registered trademark and the UUNET logo design and The Internet at Work are trademarks of UUNET Technologies, Inc.

PROFILE

The Sky Is the Limit

They enjoy technology.
They have money to buy technology.
They believe up-to-date information is critically important.
They are accustomed to talking to people they can't see.

Sound like perfect candidates for a Web community? They are. Those characteristics easily apply to the community of amateur pilots. So it's not surprising that a flock of Web sites offer amateur pilots all kinds of advice, games and vicarious thrills. The very best may be 50/50 winner Landings (*www.landings.com*), a Cambridge, Mass.-based site that was created last year by Yonathan Yoshpe, the son of an Israeli Air Force pilot, and funded by Drive Inc., a software development company in Cambridge, Mass. In building Landings, Yoshpe took information already available from two authoritative aviation sites, acro.harvard and a general aviation site at NASA, redesigned the interface and produced this fine for-profit site. But even with impressive numbers like 280,000 visitors a month, Landings' ad revenues have yet to cover all of the costs of site maintenance, which requires three full-time people.



That is not for any lack of content. Landings is packed with useful (and searchable) databases including FAA regulations, Canadian regulations, the Pilot Controller Glossary, airworthiness alerts and many more. Every two weeks, the site posts a new issue of the online magazine *GA News & Flyers*, and every day, it seems, Landings adds more links to flying clubs, museums and publications.

–Johan Gustafson

PHOTO BY FURNALD / GRAY

First Things First

"The record demonstrates that the growth of the Internet has been and continues to be phenomenal. As a matter of constitutional tradition, in the absence of evidence to the contrary, we presume that governmental regulation of the content of speech is more likely to interfere with the free exchange of ideas than to encourage it. The interest in encouraging freedom of expression in a democratic society outweighs any theoretical but unproven benefit of censorship."

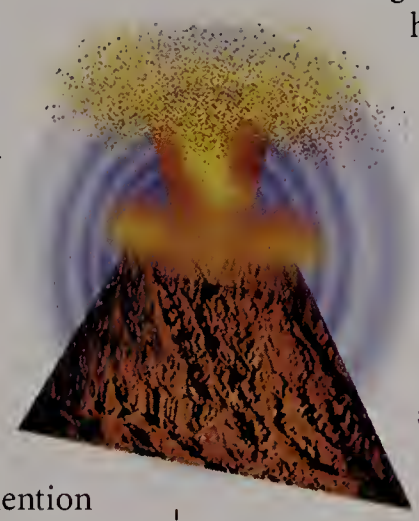
From the U.S. Supreme Court decision decreeing that the Communications Decency Act violates the First Amendment. This quote was taken from 50/50 winner C-Span (www.c-span.org).

Winning by a Landslide

THREE YEARS AGO, two federal agencies with exceptionally low visibility and none-too-high credibility were staring at the blade of the congressional ax. Today, they are not only surviving but thriving, thanks to Web efforts that made their information easily accessible to millions of people.

Prior to 1994, the U.S. Geological Survey (USGS), the nation's largest earth science research and information agency, "did an absolutely terrible job of marketing information to the public," says Kenneth J. Lanfear, chair of USGS's Internet Services Coordinating Team. Few people who weren't engineers and scientists even knew about the agency's services, such as allocating water resources or monitoring earthquakes.

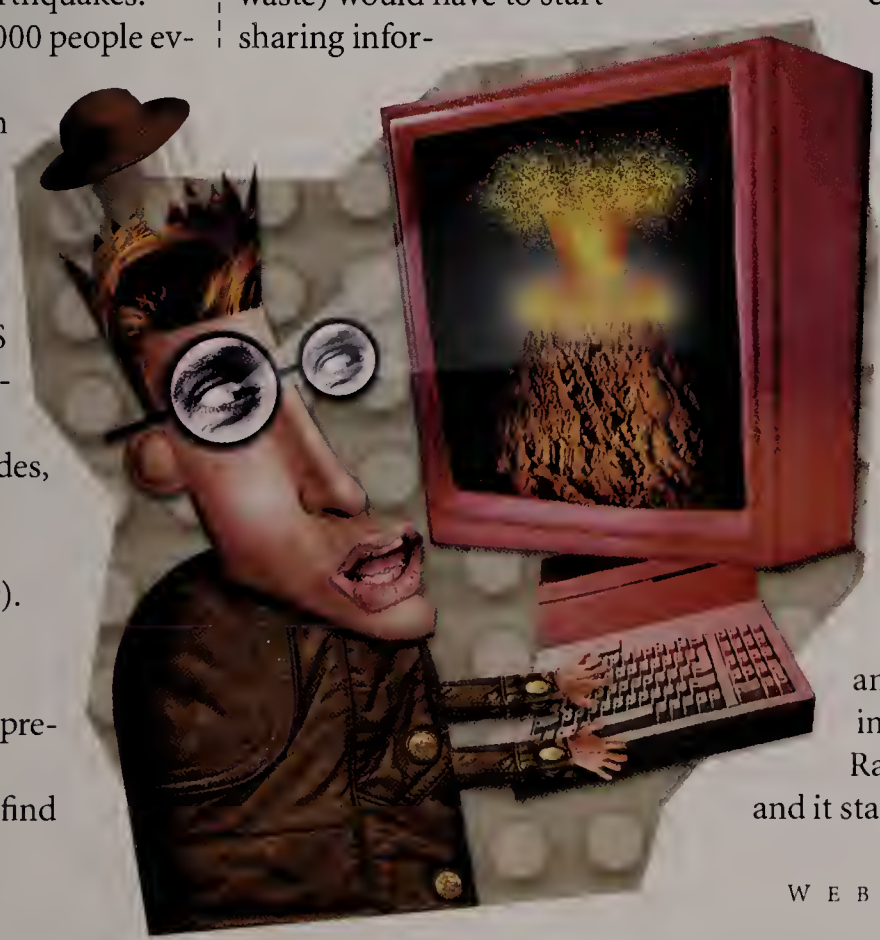
Today, 300,000 people every month—many of whom had never heard of the USGS—rely on the 50/50 winning USGS Web site for information on floods, landslides, volcanoes and earthquakes (*www.usgs.gov*). Kayakers and fishermen, for example, who previously had to drive hours to find suitable water, "can't get enough of the site," says Lanfear. The site is also used by emergency professionals in times of crisis, such as last year's flooding of Willamette Valley, Ore. Lanfear says access to real-time data feeds and cooperation with a forecasting and warning effort that included other agencies helped save many lives and an estimated $2.7 billion worth of flood damage. Not to mention the agency's neck.



The Environmental Protection Agency was in a similar fix. Facing massive budget cuts, it had to let people know that it actually did something useful, and it also had to do that something better. The latter challenge meant that the many EPA offices (water, air, hazardous waste) would have to start sharing information freely with one another as well as with outsiders.

"Previously, turf was the name of the game," says Pat Garvey, director of the EPA's Envirofacts Warehouse, a huge data warehouse that was created to integrate all EPA data and make it available from a single source. That data is now available online at *www.epa.gov/enviro/index.html*. The immediate access to EPA information has reduced Freedom of Information Act requests by 20 percent.

A state official, for example, can use the site to find his site's counterpart in another state. Or someone contemplating buying a house might query the site about a prospective neighborhood by ZIP code to learn what kind of toxins have been released nearby.



"My wife and I were driving down to Raleigh, N.C., and it started to smell outside Raleigh," says Garvey. "My wife thought I had passed some of that burrito I had eaten. But we went to the Web and found that a lot of communities on Route 1 outside of Raleigh had air emission licenses. That's the kind of thing that people can find out via the Web."

–Jennifer Bresnahan

ILLUSTRATION BY OCTAVIO DIAZ

Truer Still

"In this matter of advertisements, the surest way of attracting attention is, after all, to place the advertisement as near as possible to matter which is sure of being read.... The eye naturally wanders from the slashing editorial... to the modest business announcement alongside and lingers there."

From "Hints to Advertisers" first published in the Sept. 18, 1858, issue of Harper's Weekly. *This excerpt can be found at The Digital Scriptorium, a 50/50 winning Web site (*scriptorium.lib.duke.edu/scriptorium.html*) that posts much of the special collections library at Duke University.*

Professional Help

MANY TRADE and professional organizations use the Web to deliver information and services—around the clock and at little or no additional cost. Among the industry-specific standouts are three WebMaster 50/50 Internet winners: SignWeb and Innvest, both virtual organizations, and the National Association of Printers and Lithographers' Web site.

SignWeb (*www.signweb.com*) provides a catchall environment for the sign industry. Manufacturers, vendors, distributors, business owners and others can network on message boards, catch up on industry news, peruse classified ads, shake their heads over Ugly Sign Contest entries and browse in a resource center stuffed with how-to guides, course information and events listings.

And it's all free. Sponsors pay the freight with advertising options such as a listing in a searchable database or a front-page banner.

Innvest (*www.innvest.com*)—subtitled America's Hotel On-Line Superstore—posts information about hotels that are for sale, services and products used by the hospitality industry, and hospitality career opportunities. Through an agreement with about 45 hotel brokers, Innvest lets owners and buyers access details about as many as 300 available lodging properties. The site allows more than 15,000 vendors to reach potential customers and maintains a special area for those interested in franchises. Other resources include a lending information center with an online mortgage calculator.

Like SignWeb, sponsor-supported Innvest accommodates users without charge. Innvest says the cost to advertise in an industry trade magazine can run up to $7,500 per page, whereas Innvest charges $300 per year, with revisions available any time.

Another fine professional resource is the National Association of Printers and Lithographers Profit Connection (*www.napl.org*). The site offers reams of resources and directories, a supplier-consultant database, specialized online forums, regional sales data and, of course, information about the association itself. But the association is proudest of its automated benchmarking area. Here, printers enter their financial information and instantly receive a series of confidential graphs comparing their numbers with NAPL's industrywide standards.

NAPL credits the site with attracting new members as well as new ad dollars. Dues-paying association members can access several password-protected areas, such as the site's Printers' Exchange, a resource that lists used printing equipment for sale. The bonuses are a nice reminder that, once in a while, you do get what you pay for.

–Anne Stuart

Even the Score

Web sites are full of information about intelligent agents, but only the American Society of Composers, Authors and Publishers (ASCAP) site can help if your problem concerns a really dumb agent.

Say you're a songwriter, and you're hoping to win the contract to write the musical score for a major motion picture. You've wangled a lunch with a studio hotshot, but when you call your agent, his voice mail explains that he's at Club Med in Puerta Vallarta searching for talent.

No problem. Who needs an agent when you can visit 50/50 winner *www.ascap.com* and read "The Feature Film Background Score Contract," part of an extremely informative excerpt from *Music, Money and Success: The Insider's Guide to the Music Industry*, a book by Jeffrey and Todd Brabec?

You'll learn, for example, that you should accept the paltry $75,000 the studio wants to pay for your score because you will be able to list a feature film credit on your résumé. You'll learn that if, for some reason, you are forced to leave the safety of Los Angeles, you shouldn't be embarrassed to ask for $1,500 a week for expenses. And you'll find helpful tables that provide royalty schedules from many countries (from Argentina to Switzerland) and information on many types of distribution (from cable TV to local TV).

Check it out, and let your agent stay in Puerta Vallarta to hunt talent. God knows he could use some.

–Art Jahnke

PHOTO BY D. KATZENSTEIN, PHOTONICA / ILLUSTRATION BY OCTAVIO DIAZ

©1997 Hewlett-Packard Co.

If the net is all about breaking down walls, how do you make sure a few still remain? The Internet promises accessibility. That is also its threat. But with HP's Praesidium enterprise security solutions like VirtualVault, exportable encryption and the latest smartcard technology, only the people you designate have access to your information. Our security solutions span any environment. And secure any enterprise. Come on in and see at www.hp.com/go/security Capitalize on chaos.

HEWLETT® PACKARD

Keys to a Kingdom

IN UPWARDLY cultural homes across America, school-age kids spend their evenings shuttling back and forth between two keyboards, one on the computer, one on the piano. Piano on the Net (*www.artdsm.com/music.html*), a 50/50 contest candidate, promises to make both activities more rewarding.

The Web site presents 14 starter studies for beginning students (who learn how to find middle C), 12 for intermediate students and nine lessons for advanced students (who compose original blues melodies). It was built without a profit motive by Clint Clark, a musician, composer and professional Web developer.

"I've been playing the piano since I was 6, and I thought it would be nice to give something back," says Clark, whose Des Moines, Iowa-based Web development company is called The Art Department.

Piano on the Net gives students everything but the humiliation of playing wrong notes during those stressful, rigidly scheduled and pricey piano lessons. Students can read scores, see keyboards and even hear many of the songs they are learning played in Apple Computer Inc.'s QuickTime. The site, which can be viewed in English and Spanish, even has pop quizzes, which are graded (using Common Gateway Interface code) and returned to the student.

As for ROI, Clark says his return is the satisfaction he gets from pursuing his personal goal.

"I'd like to teach music to everyone worldwide," he says. "And I'd like to do it for free." *–Art Jahnke* WM

Southern Exposure

In addition to orange and palm trees, Florida has groves of outstanding, highly interactive, resource-rich public Web sites. That abundance was evident in the WebMaster 50/50 awards, with two Sunshine State sites capturing winning Internet slots.

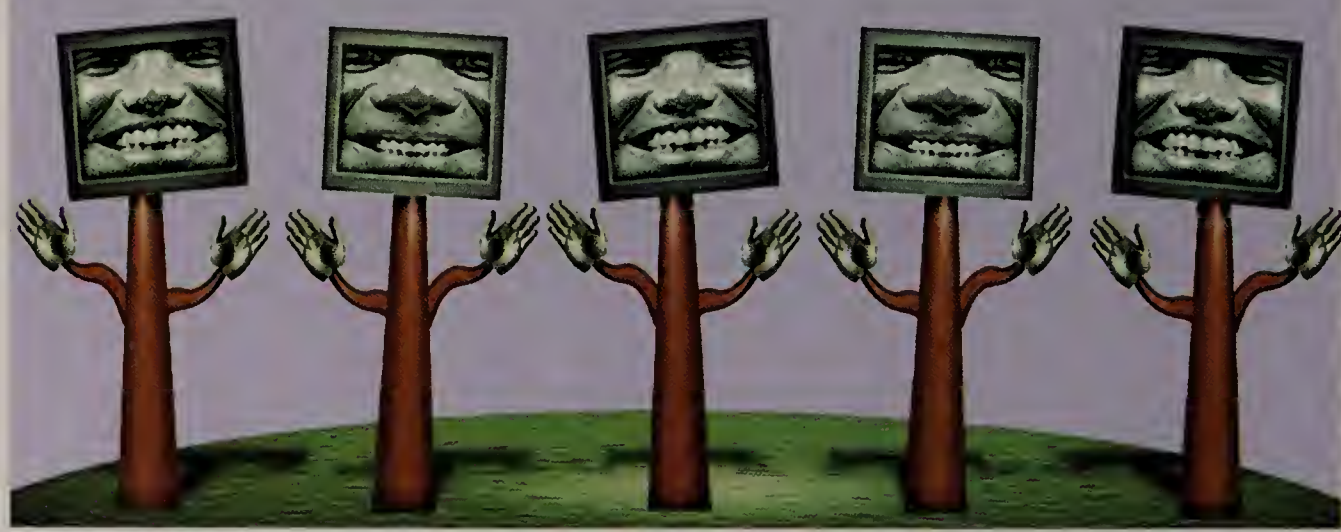
Destination Florida (*www.goflorida.com*) presents information by region, giving travelers details on motels in Fort Myers, places to eat in Orlando or special events in the Keys. It also organizes its resources based on tourists' lifestyles, whether they're golfers, gamblers, honeymooners or harried parents. In the Special Places, Special Interests section, visitors can click for details on Florida's Black History Trail, drag racing, family activities, fishing spots, gay communities, nude beaches, spring break and more. And once they know where they want to go, tourists can book rooms or cruises through Destination Florida. Partnerships with American Express Travel Service and Kingdom Tours' Florida Vacation Network let users book tour packages.

Founded as a joint venture of two competing newspaper publishers in January 1996, Destination Florida now employs 20 full-time people.

For those so enamored of this subtropical paradise that they already live there, the Florida Department of State site (*www.dos.state.fl.us*) is a handy way to access government information without running the bureaucratic gantlet.

Home page visitors will find the expected information about services, meetings, historical resources and elections. But the site also offers information previously available only on paper, such as candidate financial disclosures and decisions on art grant applications.

Developed on a shoestring with no full-time staff, the site usually gets about 55,000 accesses daily—except during elections. Then, the numbers multiply nearly five times as residents try to learn from the source who's in and who's out. ***–Anne Stuart***



CORRECTION: A photo caption on Page 26 of the June 1997 story "Under the Hood at Ford" incorrectly identified the subject. The photo subject is Mike Ledford, Ford's director of process reengineering. We apologize for the error.

ILLUSTRATION BY OCTAVIO OIAZ / PHOTO BY MASAO MUKAI, PHOTONICA

EITHER CAN GET YOU AROUND TOWN

ONLY ONE'S READY FOR SERIOUS COMPETITION

iCat Electronic Commerce Suite 3.0™ is the only solution that lets you create high-performance Internet and intranet catalogs faster, more efficiently, and with fewer headaches. It includes ready-to-use templates and powerful Carbo™ technology which allow you to customize just about everything. It's the only electronic commerce software that supports innovative template plug-ins and server extensions from leading vendors including Intermind, LitleNet, TAXWARE and others. It's the only solution that runs on Windows, Macintosh, and UNIX platforms — and works with the most popular ODBC databases. And it's the only solution that allows you to apply your creative and technical skills without restraint. So what are you waiting for? Test drive catalogs built with iCat software at **www.icat.com**

3.0

iCat

THE COMPLETE E-COMMERCE SOLUTION

Carbo Command Language and editing environment | Web server and platform independent | Optimized performance via ISAPI/NSAPI | ODBC database support | Integrated secure transactions | Template plug-ins and server extensions

THE WORLD'S BEST SELLING **E-COMMERCE** SOFTWARE.

CaRbo™ LOADED

For more information, call iCat Sales at **888-553-8800.**

©1997 iCat Corporation. All rights reserved. iCat and the iCat logo are registered trademarks of iCat Corporation. iCat Electronic Commerce Suite, Carbo, and the Carbo-Loaded logo, are trademarks of iCat Corporation. All other trademarks are the property of respective owners.

Behind every great champion there will be a great TRAINER

Prosoft is the only company focused
exclusively on the task of helping

We do it with the most comprehensive hands-on, instructor-led curriculum available anywhere.
These courses are delivered throughout the USA in state-of-the-art, T-1 enabled training centers.
Prosoft supports all major Internet technology platforms

businesses
UNLOCK THE PHENOMENAL PRODUCTIVITY GAINS
OF INTERNET TECHNOLOGIES.

www.888prosoft.com

with the uniformly high Prosoft standard of proprietary courseware and instructional excellence. And Prosoft is ready with training at the starting gun. For further information, course descriptions, locations and class schedules, call 1-888 PROSOFT, or visit us at www.888prosoft.com.

PROSOFT™
Training Solutions For The Internet Age ™

Winning Glances

FOUR GREAT SITES MARK THE FOUR CORNERS OF THE HOUSE THE WEB BUILT

BY JIM STERNE

When the editors of *WebMaster* asked me to provide an opinion on the marketing strategies behind the external sites in the WebMaster 50/50, I was flattered. I was also overwhelmed. Many of the sites are so well thought out that an instructive discussion of just one of them could fill several pages. So in an effort to say something truly useful in a limited space, I will leave the general examinations to curious readers and talk here about the wisdom behind the marketing strategies of four deserving winners, whose purposes represent the four corners of the house the Web built.

Building a Web site is equal to and greater than writing a software application for strangers. If you don't know the transactional goal for your site, it's time to rethink your premise. If you're trying to educate people about your product so that they can make a buying decision, then your transactional goal is education. If you want people to buy online, then your site is the point of sale and must be dealt with accordingly. If your aspiration is to provide superior customer service on the Web, solving problems becomes your goal. If your intent is to draw traffic in order to sell advertising, then you have a different challenge altogether. What makes for truly great Web site implementation is the careful crafting of the site to match the stated goals.

ILLUSTRATION BY FERRUCCIO

Selling Ideas

If the main objective of your site is to help people learn more about your products, you could learn a lesson from Eastman Kodak Co.'s 50/50 winning site (*www.kodak.com*). It's pretty as a picture.

The problem Kodak faces is figuring out how to best segment its customers and cater to each segment discretely. There's a world of difference between the family cameraman and the professional photographer, and no one knows that better than Kodak.

That is where Kodak shines. They offer lots of product information for various types of customers. Depending on your interest, you can dip into Kodak's Business Solutions section and find categories such as government imaging solutions, education solutions, health imaging, motion picture and television, or professional imaging.

Kodak has bent over backward to provide an equally diverse set of road signs to help those customers find those products. The total effect, when you add up Show and Tell expert advice, PhotoChat sessions, hints on taking fun family pictures and a Digital Learning Center tutorial on the neat things that can be done with digital imaging, is the image of Kodak as a company that cares. It doesn't just want you to buy Kodak products. The company uses its Web site to deliver the message that it wants you to be successful—successful at understanding the cinematic craft behind that multimillion-dollar motion picture or successful in recording your summer vacation.

Selling Concert Tickets

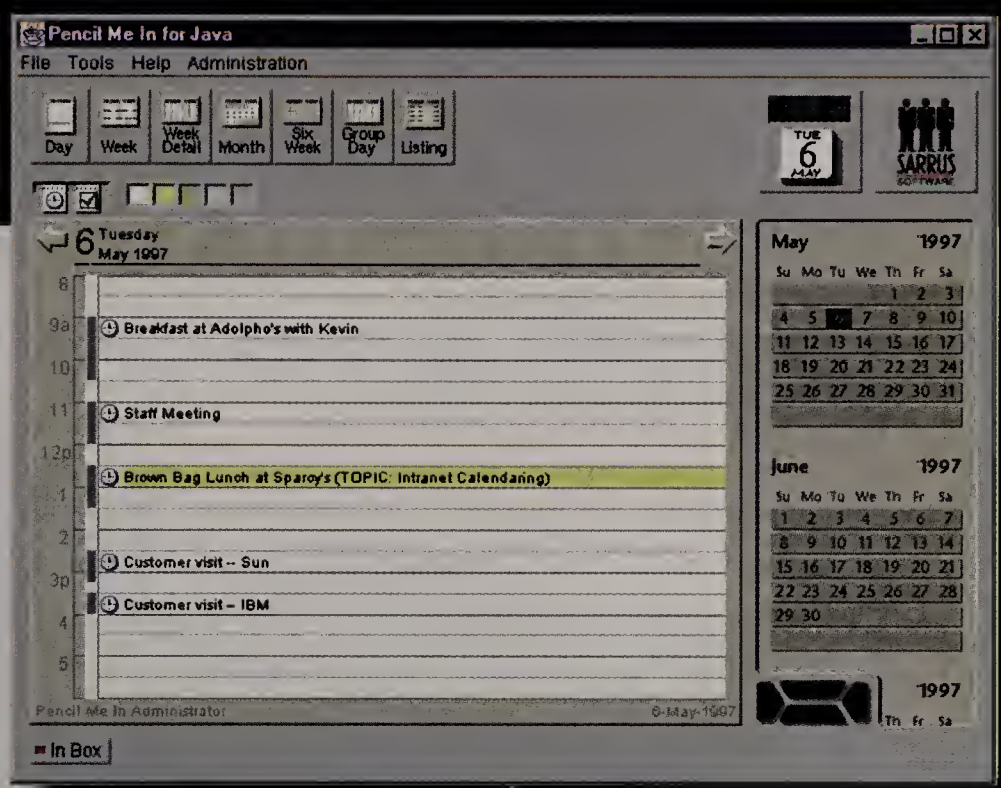
Barry Diller wants Ticketmaster. Diller is chairman of Home Shopping Network Inc., and he acquired 47.5 percent of Ticketmaster Corp. in a stock swap with Paul Allen, investor extraordinaire and a longtime Friend of Bill (Gates, that is). Diller is reportedly rounding up a few more shares on the open market to gain that all-important majority control. Chances are good that a visit to Ticketmaster's Web site (*www.ticketmaster.com*) helped clinch the deal with Allen. Diller smelled money.

I did too. The ease with which one can find a favorite artist and see when and where performances are scheduled puts Ticketmaster on the WebMaster 50/50 list.

Ticketmaster's Web site has to cater to the widest possible

www.web-master.com/

Sarrus Introduces a Powerful Idea in Intranet Calendaring



Simplicity

Announcing Pencil Me® in for Java™
Cross-platform calendaring for the enterprise

The ROI of Intranet Calendaring
Enterprises from small businesses to the Fortune 1,000 are discovering that intranet calendaring gives them a tangible return on their investment. Why? Because bringing together personal, group, and shared resource scheduling on the intranet makes these tasks more efficient for individuals and whole organizations.

Power and Ease of Use
CIOs and Webmasters are turning to Pencil Me In for a simple reason. It's the only product that combines the power of enterprise calendaring and scheduling with the simplicity of a paper time planner.

Pure Java Apps Unify the Enterprise
62% of Fortune 1,000 companies with active Internet initiatives have already embraced Java for development and deployment.* They know that software written in Java runs on any Java-enabled computer. And for collaborative apps like calendaring and scheduling, that means greater leverage.

Call Us for a Free Demo
Our customers love Pencil Me In. We think you will too. Call us or visit our web site at www.sarrus.com for a demo of Pencil Me In. And simplify everyone's life.

Pencil Me In for Java
Cross-platform calendaring for the enterprise.

Sarrus Software, Inc.
500 Airport Blvd.,
Suite 300
Burlingame, CA 94010
415-343-9111
info@sarrus.com

*As reported by Forrester Research, "The Fortune 1,000 Discovers Java" (Forrester press release dated 1-Jul-96 — http://www.forrester.com/pressrel/MAY96SWP.htm).

© 1997, Sarrus Software, Inc. All Rights Reserved. Sarrus, the Sarrus logo, and Pencil Me In are registered trademarks of Sarrus Software, Inc. Java and all Java-based trademarks and logos are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. and other countries. All other trademarks mentioned are the property of their respective owners.

tastes, and its promotions offer contests to win prizes, including tickets to the Ringling Bros. and Barnum & Bailey circus, a backstage tour of the Joffrey Ballet of Chicago and ringside tickets to WCW Wrestling in Chicago.

Want to get the cheapest airfare to your entertainment of choice? Ticketmaster has a deal with the Internet Travel Network.

OK, so it's got daily Top 25 lists (generated by users accessing the database) to tell you what's hot. So it gives you a heads-up on what's going on sale every week so that you're not left at the end of the line without a ticket. So it has info on local restaurants, venue locations, parking, seating charts, news and interviews, T-shirts, caps and CDs. So what? Got a teenager in the house? Keep him or her away from the credit card.

Selling Customer Support

FORTUNATELY FOR THOSE OF US who love the Web and want to see it thrive, there's Cisco Systems Inc.'s 50/50 winner (*www.cisco.com*) blazing a trail of superior service. Why is that a great marketing strategy? Because it adds infinite value to the product. Tell your prospective customer to check out the level of Web support they'll get if they buy from you and you'll make them happier than if you send them a T-shirt.

At Cisco Connection Online, you'll find an automated pricing tool, an automated product configurer and a Software Center that contains thousands of downloadable files. You'll also find the Technical Tips and References section and a database of reported bugs (and fixes for them). There are software upgrade planners, and users can instantly download and install a product upgrade.

Peter Corless, a Cisco content manager for the Software Center, likes to say that people are moving from using the Web as a tool to using the Web as a service to using the Web as a business. In the process, he notes, Cisco is making its customers smarter. Customers can learn more about a specific product here than they can from a service rep who is responsible for a wide variety of gear. And they have access to the panoply of available customer documentation on the Web site. When customers do send an e-mail or call for information, they're looking for more than just speeds and feeds.

Selling Advertising Space

THE TENAGRA CORP.'S YEAR 2000 Information Center (*www.year 2000.com*) depends on visitors and repeat visitors to drive its advertising engine. Yes, the site was created to provide the best and latest information about the millennium bug. Yes, there are essays, helpful hints, case studies and solid advice from people in the know. But this isn't a site put up by enthusiastic graduate students with a desire to make a name for themselves through Webcraft. It's a profit center. And it's successful.

As an advertising venue, the site offers a feast of ad locations: banners, listings and minisites within the site. They've created a fine spread that blends content with content-laden advertising. Consumers are not tricked by empty calories but given a well-rounded repast in which the ads themselves are tasty morsels and not just garnish. Here's the Year 2000 Information Center recipe:

Ingredients:

- *One hot topic that has everybody in a tizzy (the year 2000 problem)*
- *One year 2000 guru (Peter de Jager)*
- *A cup of new product and service announcements*
- *A dollop of help-wanted classified ads*
- *Two quarts of products that will help get us out of this mess*
- *A pint of applications and development tools user groups*
- *Three cups of links to other helpful sites*
- *Two pounds of archives*
- *One finely sliced and diced search tool*
- *Several places people can gather online to discuss their experiences*

Instructions:

- *Stir well*
- *Bake with fast-loading graphics*
- *Dramatize the coming dilemma with a countdown clock that changes every second*
- *Cater to your advertisers without losing people to vendors' Web sites*
- *Serve with undying attention to detail and a staff that understands the need for the site to be kept fresh*

People are moving from using the Web as a tool to using the Web as a service to using the Web as a business.

The people who built those Web sites share one thing. They all had a clear picture of what they wanted to get out of their Web effort. So if you want to attract attention, educate potential customers or provide customer service, you need to take different approaches from the get-go, and your success will be measured very differently. On the other hand, if you want to offer a great point of sale and sell lots of stuff, you'll know you're doing the right thing when Barry Diller comes a-calling. WM

Jim Sterne is the author of World Wide Web Marketing *and* Customer Service on the Internet. *He can be reached at* jsterne@targeting.com.

www.web-master.com/

CIO BUSINESS PERSPECTIVES CONFERENCE

NET BUSINESS: COLLABORATION, CO-OPETITION & PROFIT

Moderator
Tom Davenport

Industry Experts
Don Tapscott
Dave Barry
Tim Carter
Tim Horgan

DECEMBER 7-10, 1997

CENTURY PLAZA HOTEL AND TOWER

LOS ANGELES, CALIFORNIA

NET BUSINESS: COLLABORATION, CO-OPETITION & PROFIT

Nowhere in our institutional memories do we have the experience base to deal with the challenges the 'Nets provide. Alternate distribution and marketing channels, enterprisewide collaboration, modern business practices, partnerships with competitors and new profit metrics.

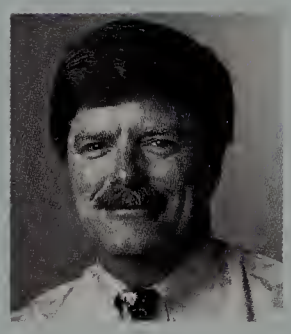
Are you prepared to embrace these new technologies and take advantage of the benefits to this new business medium?

Net Business: Collaboration, Co-opetition and Profit, December 7-10, 1997 at the Century Plaza Hotel and Tower in Los Angeles, will explore both the required multi-disciplinary partnerships and affiliations necessary for creating 'Net business results and improving your bottom line.

Net Business brings together industry experts such as our Conference Moderator Tom Davenport, Curtis Mathes Professor and director, Information Management Program, College and Graduate School of Business at the University of Texas at Austin; and Don Tapscott, author, *Growing Up Digital*, and president, New Paradigm Learning Corporation, our Keynote Presenter. Other presenters include Dave Barry, nationally syndicated columnist and author, *Dave Barry in Cyberspace*; Tim Carter, author and radio talk show host, *Ask the Builder*; and Tim Horgan, vice president of technology, CIO Communications, Inc.

To secure your place at **Net Business: Collaboration, Co-opetition and Profit**, register on our Web site at *www.cio.com*, or complete and fax the enrollment form on the back of this brochure to 508 879-7720, or call us at 800 355-0246 for more information.

Join us December 7-10 in Los Angeles as we learn how to reap the rewards of new partnerships to best leverage your 'Nets.



Tom Davenport
Moderator
Curtis Mathes Fellowship Professor
Director
Information Management Program
College and Graduate
School of Business
University of Texas at Austin

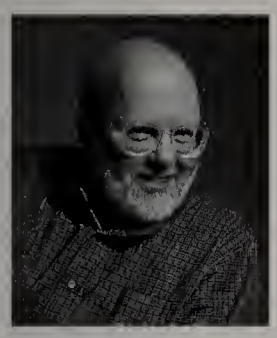
Don Tapscott
Keynote Presenter
Author
Growing Up Digital
President
New Paradigm Learning Corporation

COMPANION PROGRAM
Participation in the Companion Program includes all scheduled receptions, meals, entertainment and a Monday afternoon activity. Companions must be enrolled in this program to participate in any conference-related activity. The Companion Program does not include conference sessions.

CONCURRENT SESSIONS
On Monday and Tuesday, our Corporate Hosts will offer a series of concurrent sessions. Participants may attend multiple sessions throughout the two days, during several time slots.

PRESENTERS

Dave Barry
Nationally Syndicated Columnist
Author
Dave Barry in Cyberspace



Tim Horgan
Vice President
Technology
CIO Communications, Inc.

Tim Carter
Author
Radio Talk Show Host
Ask the Builder

CORPORATE HOSTS

BMC SOFTWARE

Brio Technology

Collectanea
The Research Gateway

mks
Mortice Kern Systems Inc.

PEOPLE Soft

SiliconGraphics
Computer Systems

Sun microsystems

The Century Plaza Hotel and Tower • Los Angeles, California

Ideally located adjacent to Beverly Hills in the exclusive enclave of Century City, The Century Plaza Hotel and Tower is there to make you very much at home in one of the most celebrated places on earth. You will be steps from over 100 specialty shops and restaurants at Century City Shopping Center and Marketplace, just across from the Avenue of the Stars, the ABC Entertainment Center, five minutes from Rodeo Drive and fifteen minutes from the sandy beaches of Santa Monica or Venice.

Although only twenty minutes from the airport, the Century Plaza is a universe away from daily distractions and routine. Amid ten acres of tropical gardens and sparkling pools, in meeting spaces and luxury retreats that are the choice of movie stars, presidents and royalty, the Century Plaza takes great pride in making each event a legend in its own time.

ENROLLMENT FORM

NET BUSINESS: COLLABORATION, CO-OPETITION & PROFIT

December 7-10, 1997 • Century Plaza Hotel and Tower • Los Angeles, California

Please visit our **Web site** *at www.cio.com or* **Fax** *to 508 879-7720. You can also* **Call** *us at 800 355-0246 or* **Mail** *completed form to: Executive Programs, CIO Communications, Inc., D3810, Boston, MA 02241-3810.*

NAME

TITLE

COMPANY

ADDRESS MAIL STOP

CITY STATE ZIP CODE

PHONE FAX

E-MAIL COMPANY WEB SITE ADDRESS

WHAT IS YOUR INDUSTRY?

YOUR NAME AS YOU WANT IT TO APPEAR ON YOUR BADGE

HOTEL ARRIVAL DATE HOTEL DEPARTURE DATE

NAME OF COMPANION (IF PARTICIPATING IN COMPANION PROGRAM)

WTIA

CHECK ALL THAT APPLY

ENROLLMENT FEES:

❍ **Private Sector**
The fee is $1,545.

❍ **Government/Military Executives**
The fee, **which includes your hotel for three nights**, is **$1,990**. *Do not make your own hotel reservations,* **CIO** *will make them for you.*

❍ **Check here if this is your first CIO conference.**

OTHER ACTIVITIES:

❍ **COMPANION PROGRAM: ($275)**
Companions must be enrolled in this program to attend any conference-related functions. Includes all scheduled meals, receptions, entertainment, a stretch and tone class, companion breakfast and a Monday afternoon activity. Conference session attendance is **not** included.

❍ **I am not staying at the the Century Plaza Hotel and Tower.**

Name of alternate hotel

PAYMENT INFORMATION *(Please make checks payable to CIO Communications, Inc.)*

❍ Check enclosed ❍ Bill company **(A purchase order # must be submitted)**

❍ P.O. #

❍ Credit card #

❍ AMEX ❍ VISA ❍ MC Exp.

Signature:

To Enroll Call 800 355-0246, visit our Web site at *www.cio.com* or FAX us at 508 879-7720.

Business Card REQUIRED In Order To Process Registration

ATTIRE
Casual! No suits, ties or business attire!

HOTEL ACCOMMODATIONS
A block of rooms has been reserved at the Century Plaza Hotel and Tower. We urge you to make your reservations early by calling the hotel at 310 551-3300. Be sure to identify yourself as part of the **CIO** *conference to receive the discounted conference rate. Please guarantee your room with a credit card, as all unreserved or unguaranteed rooms will be released on November 6, 1997. Hotel reservations, cancellations and charges are your responsibility.* **CIO** ***will make hotel reservations for government/military participants only.***

TRANSPORTATION
American Airlines is the official conference carrier. For discounted airfare, call 800 433-1790 and reference Star File #S39D7AB. AVIS is the official car rental provider. Call AVIS at 800 331-1600 and reference B766657.

ENROLLMENT FEES
All enrollment fees must be paid in advance of the meeting. *Fee includes conference sessions, concurrent sessions, corporate host displays, conference materials and scheduled meals, receptions and entertainment. Transportation, hotel and recreation are your responsibility.* ***Please note that submission of this enrollment form to*** **CIO** ***obligates the attendee/ sender for any enrollment fees.***

CANCELLATION
You may cancel your enrollment up to November 7, 1997 without penalty. A $250 administration fee will be imposed for cancellations between November 8-21. No refund or credit will be given for cancellations received after November 21, 1997 or on-site. ***All cancellations must be received in writing.*** *You may send a substitute in your place.* **CIO** *reserves the right to decline enrollment to any registrant.*

CIO

CIO BUSINESS PERSPECTIVES CONFERENCE

NET BUSINESS: COLLABORATION, CO-OPETITION & PROFIT

DECEMBER 7-10, 1997
CENTURY PLAZA HOTEL & TOWER
LOS ANGELES, CALIFORNIA

Nowhere in our institutional memory do we have the experience base to deal with the challenges the 'Nets provide... **alternate** distribution and marketing channels, **enterprisewide** collaboration, modern business practices, **partnerships** with competitors and **new** profit metrics.

Although they have acquired the **experience** to guide business practices, **managers** may sometimes lack the ability to adapt to the **dynamic** technologies that their younger **Web-savvy** counterparts possess. How will executives embrace these **new technologies** and the early majority articulate the **benefits** of this new business medium?

Net Business: Collaboration, Co-opetition & Profit, to be held December 7-10 at the Century Plaza Hotel & Tower in Los Angeles, will address these issues. Moderated by **Tom Davenport** and featuring CIO's vice president of technology, **Tim Horgan**, we will explore both the required multi-disciplinary partnerships and affiliations necessary for improving 'Net **business** results and **business mastery**.

CORPORATE HOSTS

BMC SOFTWARE

GRADIENT

Intranet Partners

mks MORTICE KERN SYSTEMS INC

SiliconGraphics Computer Systems

Sun microsystems

To Enroll: *www.cio.com* ▪ 800 355-0246

www.web-master.com/

SUPERIOR INTERIORS

THREE YEARS AGO, INTRANETS LIKE THESE DIDN'T EXIST. NOW, TENS OF THOUSANDS OF PEOPLE CAN'T IMAGINE WORKING WITHOUT THEM.

By Lew McCreary

Illustration by Warren Linn

WITH INTRANETS, market laws still apply—notwithstanding the captive user base. Just because you build it doesn't necessarily mean they will come. Which is why the cleverest intranet builders have been quick to solve some long-festering systemic problems, including at least one example of what is known in the trade as "low-hanging fruit." If, right out of the gate, you give the users something they desperately need or want (conference-room scheduling, easy expense reporting, travel booking or some golden nugget of information), they will use your intranet. And, as Metcalfe's Law states, each user added to a network creates a user-squared increase in the value of that network. Consequently, you want the thing to be used and to grow—both in volume and in value. As a lure, indispensability is what you're after.

The results in the intranet division of the WebMaster 50/50 competition show an advanced sensitivity to this need for compelling value. Many, if not most, of the winning entrants have climbed well above that low-hanging fruit to attempt sophisticated and even highly specialized applications of intranet technology. Not surprisingly, their efforts reflect the cultures and business objectives of their organizations. (This all-important linkage between technology implementation and business goals was among the key criteria the magazine's editors and writers considered in judging the excellence of the self-nominated sites.) What is competitively important to the enterprise tends to be front and center in its intranet efforts.

For example, **Motorola**, which has a secure and long-established reputation for quality control (having won the coveted Malcolm Baldrige National Quality Award for its Six Sigma quality achievements), entered a site whose purpose is to support ISO 9000, QS 9000 and other quality initiatives across the company. Naturally, the site itself conforms to all document-management-related quality standards. (As nominator Damien Balk reported in his submission, "Compliance [with any of these standards] is not optional in this industry.")

Motorola wasn't alone in addressing quality issues through its intranet. The Milwaukee-based **Allen-Bradley** division of Rockwell Automation uses an intranet site (which grew out of the quality-management function) as a central repository for quality-related manufacturing data collected from six plants in three states. Allen-Bradley specializes in shop-floor-automation and process-control equipment, so it's hardly surprising that the company would focus its ingenuity on creating an intranet for monitoring its own manufacturing quality.

MCI Communications has a winning site that is likewise focused on gathering performance-monitoring data. According to nominator Rick Sheffield, manager of performance-management engineering, the intranet site monitors more than 6,000 elements of MCI's SONET transport network daily. While the initial site has only data-collecting and reporting features, developers are working on remote access and troubleshooting capabilities. Sheffield describes the site as a way to showcase within MCI the performance information that is important to collect and disseminate: "Officially, we are designated as a prototyping system, and one of our objectives is to demonstrate that the Web browser is effective as a universal user interface for many different applications."

Arguably, for most organizations, the generative spark for the intranet concept is to build an intramural communication channel that throws a defining boundary around what (for lack of a better term) constitutes an enterprise's "intellectual capital." Frequently, merely creating such a resource compels a kind of cultural self-examination: Intranet-enabled opportunities for knowledge sharing can signal a fundamental change in the way some organizations operate.

Consider, for instance, the **United States Atlantic Command**, a joint armed forces (Navy, Army, Air Force) intranet devoted, in the words of its nominator, U.S. Navy Lt. Cmdr. Tom Magno, to sharing "the collective knowledge of the entire United States Atlantic Command staff, both vertically and horizontally across all departments." Nine months into the site's existence, a discernible shift occurred, from a culture of individual contributors to one of knowledge sharing and collaboration, says Magno. The "de-layered" workflow, he says, has accelerated efficiency by providing everyone with the same information in real-time, allowing officers to make decisions without going through the traditional chain-of-command approval process.

At **Ford**, a year-old intranet is changing work processes as much as any innovation in the automaker's 94-year history. The intranet allows more than 80,000 employees worldwide to collaborate in ways never before possible, improving efficiency, eliminating redundancy and reducing mistakes—all with the long-term goal of cutting time to market. (For more on Ford's intranet, see "Under the Hood at Ford," *WebMaster*, June 1997.)

WHERE SOME INTRANETS can act as levers to change a culture, others need to be more subtle—respecting the indigenous culture if they hope to survive long enough to bring about a quieter kind of change. Forest products giant **Weyerhaeuser**'s intranet—christened "Roots" in a companywide naming contest—grew with surprising speed in a culture that nominator Deborah Erickson, senior analyst for Internet and WWW services, describes as conservative and low-tech by nature ("we grow trees"). The site began as a grass-roots effort (no pun intended) within the IT community and proliferated across the company via the Web equivalent of pollination. That growth pattern reflected Weyerhaeuser's organizational structure of autonomous, decentralized business units. Erickson's group provides style and format standards and offers hosting and consulting to departmental users who request it. From March 1996 to March 1997, Roots grew from 28 to 84 indexed sites. And Erickson expects there will be 6,000 active intranet users by year's end.

Sometimes intranets grow in response to the fast-rising interest and involvement of users. In the case of **Perot Systems**, the intranet has become an important coping mechanism for the systems integration and consulting firm's own rapid growth. During the early months of this year, Perot added more than 2,000 new employees. Smoothly

www.web-master.com/

integrating that volume of new talent presents a major management challenge. Apart from its value to existing employees, Perot's intranet became an indispensable "self-service" training and knowledge- and culture-transfer resource for the new hires. In the sort of company where customized insight is the basic product, an intranet can identify and capture sources of expertise for new employees to draw on, accelerating their progress up the learning curve. Besides its role in knowledge transfer, the site has helped sales teams develop higher-quality customer proposals more quickly, according to Perot. And, once the business has been won, the intranet helps managers allocate resources more efficiently, assembling cross-functional teams that comprise the necessary skills and knowledge base.

One of the most ambitious management-based applications of intranet technology among the winning 50/50 entrants comes from Williams & Wilkins, a Baltimore-based publisher of medical books, journals, and CD-ROM, audio and video products. Where most of the publishing industry has focused on creating Internet sites that extend the publishing business model into the online realm, Williams & Wilkins has taken a giant step toward using an intranet (which it calls "The Wave") to manage all of its product lines and business activities. To quote the nomination form: "The Wave enables W&W to manage every aspect of a product's life cycle development, including pricing and financials, product specifications and classifications, product features and benefits, marketing budgets and target markets, authors and contributors, status and production schedules, competition, features and benefits, objections and responses, personnel and contacts, marketing and catalog descriptions, images (such as a book cover), packaging, sales and projections, and complex interproduct relationships." That kind of overarching vision suggests that the future of intranets is to become not merely applications but organizational operating systems. Somebody in that company (and its development partner, Century Computing Inc., of Laurel, Md.) must be way ahead of the curve. Maybe that's why its intranet is called The Wave.

Other entrants use their intranets to target narrower pieces of the overall business process as follows:

• The biotechnology group of Unilever Research Laboratory, part of the Britain-based multinational consumer package-goods company, has created an intranet intended to speed the product development process by enhancing communication and collaboration among its researchers and scientists worldwide. The intranet supports advanced statistical analysis, molecular modeling and multimedia visualization technologies, and is regarded by its proprietors as highly secure and reliable.

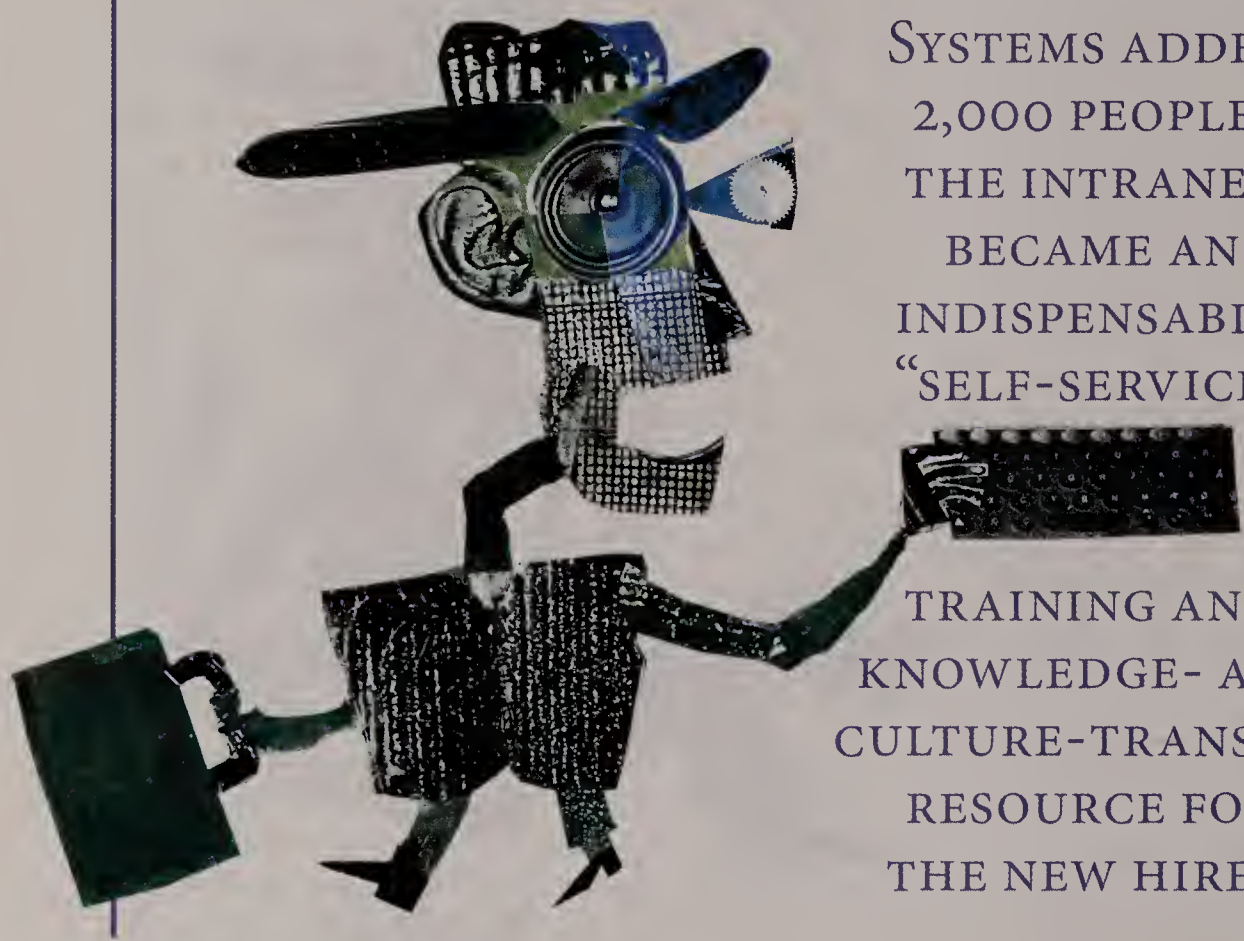
• Black & Veatch, a diversified mining, engineering and construction company, uses an intranet to give engineers and others involved in construction projects PC-based browser access to schematic 3-D renditions of complex power plant systems and their component parts, with links to text-based design specifications. Prior to the intranet, those views were available only to a small community of engineers through highly specialized Unix workstations. Now access can be granted to a broader

THE INTRANET OF THE UNITED STATES ATLANTIC COMMAND HAS "DE-LAYERED" WORKFLOW, ALLOWING OFFICERS TO MAKE DECISIONS WITHOUT GOING THROUGH THE TRADITIONAL CHAIN OF COMMAND.

group with greater ease and lower cost.

• The product information group at the Unisys facility in Roseville, Minn., is using an intranet to internally market its own services—including Web site design—making its winning entry a kind of meta site—a site that offers information about the use of the Web as an effective product information tool. Internal self-promotion and marketing are activities that seldom are done well, and for which the Web offers intriguing new possibilities.

• Exide Electronics, a maker of high-end power-protection products, uses an extranet to support its internal salespeople worldwide as well as third-party manufacturers' reps and distributors, about 700 people altogether. The ability to deliver fast-changing price, product and competitive information to a globally dispersed sales force strengthens the company's connection to its salespeople and its distribution channels.



WHEN PEROT SYSTEMS ADDED 2,000 PEOPLE, THE INTRANET BECAME AN INDISPENSABLE "SELF-SERVICE" TRAINING AND KNOWLEDGE- AND CULTURE-TRANSFER RESOURCE FOR THE NEW HIRES.

COMMUNICATING AND SHARING vital company information across a far-flung enterprise is a challenge that many intranets are trying to address. It's an especially daunting problem in large organizations, where the tendency of intranets to propagate in uncontrolled, grass-roots ways can lead to potentially serious chaos. AT&T, for example, has more than 500 intranet sites housing upward of half a million pages. To make this too-unruly mass of information a searchable, navigable and ultimately more useful resource, AT&T's Corporate Intranet Program Team has created a unifying central site built around a searching, cataloging and indexing application. While the planned full capabilities of the site have not yet been achieved (for example, n-category searches leading to dynamic page creation), we believe it represents a solid approach to fulfilling the potential of an intranet to make information both widely sharable and locatable.

Northern Telecom—another large enterprise with lots of servers (1,200) and lots of resources (1.1 million pages)—also takes an innovative approach to wide-scale information sharing. But Nortel is focusing on authenticated access control—making sure confidential internal information is accessible only to the properly authorized groups and individuals within the company. Using a gateway intranet (Nortel.Access), Nortel is enabling single log-on access control to 10,000 of its 63,000 employees worldwide (in its current startup phase, the system is targeting senior managers and executives, but it is planned to be accessible to all employees). In some enterprises, the need for easy information access is inseparable from the need for secure access; the goal of Nortel.Access is to provide for both ease and security.

All in all, our judges were greatly impressed by the variety of uses to which winning entrants are putting their intranets. Our expectation (O we of little faith!) was that there would be a small number of genuine innovators among a stew of relative sameness. Shame on us. The good news our 1997 WebMaster 50/50 intranet winners proclaim is that the famous curve that everyone aspires to stay ahead of is an inventive blur that races ahead of itself. WM

Editor in Chief and Publisher Lew McCreary can be reached at mccreary@cio.com.

www.web-master.com/

MACH 5.1 x!

Blinding speed for CGI applications

PATROL CGI Server™:

- Increases HTML and Web Server performance and availability by up to 5.1 times
- Increases Web site security by placing CGI applications behind the firewall
- Increases the reliability of your CGI applications and the Web server
- Increases the fault tolerance and manageability of your Web site
- Leverages existing hardware
- Requires no changes to existing CGI application code

Take your Web site visitors from wait to WOW! Visit our site at *www.bmc.com/cgiserver* to view performance benchmarks and to **download a free trial.**

BMC Software, Inc. is an Equal Opportunity Employer. BMC Software, the BMC Software logos and all other product or service names mentioned are registered trademarks or trademarks of BMC Software, Inc. in the USA and in other select countries. ® and ™ indicate USA registration or USA trademark. Other logos and product/trade names mentioned are registered trademarks or trademarks of their respective companies. ©1997, BMC Software, Inc. All rights reserved.

THE BEST AND THE BUSIEST

THE REAL CHAMPIONS OF THE WEBMASTER 50/50 ARE SITES THAT LOOK GOOD *AND* WORK HARD

By Leigh Buchanan

Illustration by Jon Conrad

PERSONALLY, I think the term "surf" should catch the next wave outta here. The surfer's purpose—if you can call it that—is to drift along the surface of the Net and latch on to one brief diversion after another rather than accomplish something meaningful. It is a lack of surfers that caused the demise of so many early publishing Web sites, whose business models relied on users being flush with cash and fat with time.

The sites that continue to hold their own—and in some cases, thrive—are the destination sites. Those are the places people go to do something, to learn something, to save time rather than squander it. Typically created to serve a carefully targeted constituency, destination sites are becoming an increasingly critical point of interaction for their host organizations.

When we launched *WebMaster* two years ago, such sites were rarities. Today they are everywhere, and their abundance was literally brought home to *WebMaster* editors and writers as we

www.web-master.com/

$x = 3a\phi/(1 + \phi^3)$
$= 3a\phi^2/(1 + \phi^3)$
$3a \sin\theta \cos\theta$
$\sin^3\theta + \cos^3\theta$

culled through the Internet submissions to our 50/50 competition. The contest, recognizing sites that deliver exceptional business value, attracted more than 700 entries, including the ambitious constructions of Fortune 500 companies (Microsoft's Expedia employs 100 people and generates $1 million a week in business) and the small, at times exquisite, renderings of lone entrepreneurs (Pennington Hardwoods of Indiana's nifty site, which has won the company new long-term business, is the creation of self-taught developer and business owner Kevin Pennington). The list of winners reflects that diversity—and also the growing level of sophistication and general excellence available online.

FEDERAL EXPRESS, Cisco Systems and Silicon Graphics are to electronic commerce what Candice Bergen is to the Emmys: sure winners whose superiority is recognized so frequently that it has become almost embarrassing. There's no point enumerating all the features and functions they offer: If it's something companies offer their customers, these companies offer it on their sites. In addition, at a time when "because it's there" is no longer sufficient justification for investing in a Web presence, these businesses are demonstrating enviable ROI.

Cisco, for example, expects to save as much as $400 million in support costs and to conduct $1 billion in sales through its site this year. And Silicon Graphics' Contact Me page, which links customers to its sales force and qualifies leads by geography, product line and potential expenditures, has generated more than 7,500 leads and $2.5 million in revenues, with another $4 million in the revenue pipeline.

Marshall Industries is another paragon of electronic commerce, most notably in the area of customer support. We first wrote about Marshall in 1995 when CEO Rob Rodin was pushing the edge of a much smaller envelope by offering such features as online ordering and downloadable data sheets. Those efforts, which are still well beyond the grasp of many Web vendors, appear positively prehistoric in light of Marshall's current initiatives. For example, engineers can use the company's secure online lab to experiment with designs (users simply upload code to Marshall's Programming Center and receive programmed samples within 48 hours—for free). Engineers staff a help line in the form of a chat room all day, every day, guaranteeing customers immediate responses to their questions. And Marshall's NetSeminar, which allows companies to broadcast live and archived interactive training sessions to a mass audience in real-time, needs only one or two more awards to nudge it into the Candice category.

Software, services and high-tech goods are obvious candidates for electronic commerce, but certain consumer products are also proving to be fertile soil. Travel reservations and books may reside in the low-hanging fruit category, but they are being vended with particular finesse by Rosenbluth International and Powell's Books. Like most travel sites, Rosenbluth's Travelution lets you reserve to your heart's content, but you can also study airport diagrams, check the local weather and—in a neat Shockwave application—hear spoken translations of useful phrases (see "Going Places," Page 28). And instead of the usual photos of white sand and blue surf, the site is chock full of weird and wonderful information for business travelers. Examples: A privacy filter on your laptop screen will prevent seat-mates from eyeballing your top-secret work. Eating bananas can help you beat jet lag.

You won't need Rosenbluth to arrange a trip to Portland, Ore., where Powell's is based. "People will vacation in Portland just to visit our bookstores," says Heather O'Brien, head of staff for the Web site. "Now they can cruise our database in the privacy of their own homes." Many people are doing just that: Powell's receives more than 90,000 book queries a week through its site. One neat feature is the ability to search for books autographed by favorite authors. Not surprisingly, cyberpunk author William Gibson is represented heavily.

IF IT'S SOMETHING COMPANIES OFFER THEIR CUSTOMERS, THESE COMPANIES OFFER IT ON THEIR SITES.

We were also impressed with several new commerce sites that are so convenient and engaging that they provoke the question, "Why wouldn't I shop that way?" On iPrint's site, for example, you can design your own business stationery online, paying less and minimizing errors in the process. (It's fun, too.) If you're in the market to buy a hotel—or an ice machine or a "No Vacancy" sign for

www.web-master.com/

that matter—you can either round up industry journals and call individual brokers or check out **Wilder Group**'s Innvest: America's Hotel On-Line Superstore. They'll even put you in touch with a lender.

It would be hard for graphic artists' representative **Leighton & Co.** to field a site that isn't attractive: The illustrators in its stable are a talented bunch. But the site is also arranged smartly, letting users peruse a general portfolio; search by an artist's name, technique or expertise (the computer crowd is predictably well represented); and order printed samples by filling out a short form. And *WebMaster*'s art director, Lisa Puccio, can attest to Leighton's online utility: She often searches it for talent to grace our pages.

We regret that financial services are underrepresented among our winners—a number of banks applied, but none were engaged in true Internet banking. The insurance industry fared better, despite some recent studies criticizing insurers for being slow on the Internet uptake. **Northwestern Mutual Life Insurance**, for example, is just starting to realize sales from its site, which contains, among other things, the Insurance-Speak Glossary and an assortment of calculators to help users figure out how much they'll need to save for retirement, college and other life-changing events.

But the nicest thing about this site is its human touch, especially the reminiscences of Northwestern Mutual customers 100 years old and older. "Diet plays a vital part in longevity," reveals centenarian policyholder Mrs. M.T. McNarney. "In my formative years, I had beef, lamb, veal chops and some pork, oatmeal, prunes, sorghum, potatoes, vegetables (both canned and fresh), all cooked well and served attractively." Hey, if Northwestern Mutual is good enough for M.T., then it's good enough for me.

COMMUNITY IN THE SERVICE of commerce has proved elusive for most organizations but not for **Computer Curriculum Corp.** (CCC) and **CMHC Systems**. Educational software company CCC is profiled on Page 54: The nutshell version is that it offers a site—linked to its corporate home page—for teachers introducing technology to the classroom. CCCnet includes such handy features as a search tool that helps teachers locate peers dealing with similar issues. The thing of beauty, though, is a gallery of 15 imaginative, often gorgeous online projects that members can use to teach their students Internet skills.

Similarly, CMHC develops and markets information technology for the mental-health field, but don't expect product blurbs and press releases when you key in *www.cmhc.com*. Instead, you'll find yourself at Mental Health Net, an extraordinary resource for both professionals and laypersons interested in everything from substance abuse to chronic fatigue syndrome. In addition to heaps of educational content (the managed-care glossary is a must for those of us still befuddled by Harry and Louise), the site hosts numerous ongoing discussion forums that get lots of traffic and where participants seem genuinely eager to answer one another's questions. And yes, a discrete link at the bottom of the home page will take you to those product blurbs and press releases, but by the time you get there, CMHC will have established itself as a brand worth knowing.

Intuit's Quicken Financial Network takes a similar community service approach, although its community comprises every taxpayer in the country who detests the filing ritual (which is to say every taxpayer in the country). Intuit's stated strategy is to earn the loyalty of college students by essentially filling out their 1040EZs for them ("You answer questions. We fill out the forms. That's it."). The site is so stuffed with useful features—an online tax estimator, a tool for figuring how much others in your income range are shelling out—that it's destined for bookmarkhood on PCs everywhere.

NOT EVERY SITE HONORED by the WebMaster 50/50 aims to maximize sales or even brand loyalty. For example, it is doubtful that more students will apply to **Duke University** because its Special Collections Library hosts The Digital Scriptorium, a spectacular online assembly of rare historical documents. But the site gets done what it wants to—greatly increasing the number of people who use the library's resources and educating the public about the value of primary materials. It's a fortuitous mingling of past and future: a first-rate effort all around.

My favorite site, though, belongs to the **United States Geological Survey** (see "Winning by a Landslide," Page 7). The site links 140 Web servers nationwide, each maintained by a group of scientists with expertise in topics such as volcanoes and earthquakes. Streamflow data is graphed in real-time, giving emergency planners advance notice of the need to evacuate flood-threatened areas (earthquakes are also reported as they occur). There are gazillions of maps that users can manipulate and activities for children, such as tracking the migration path of their own personal Canadian goose.

I am embarrassed to admit that, a few months ago, I asked my son if he could find something to collect that was more exciting than rocks. After spending half an hour at the USGS site, I realize that the answer is no. WM

Former Executive Editor Leigh Buchanan is now senior editor at Inc. *and editor of* Inc. Technology. *She can be reached at* leigh_buchanan@inc.com.

Going

Rosenbluth International has long had a reputation for using technology well. Now everyone can see why.

By Cheryl Dahle

Photo by John Rae

he secret behind Rosenbluth International's Travelution Web site (*www.rosenbluth.com*) is locked in a series of cavernous rooms on the fifth floor of the company's headquarters in downtown Philadelphia. Auspiciously dubbed "The Continuum," this laboratory combines futuristic travel technology with movie-set-like renditions of each stage of a business trip. Here, you can book a plane ticket using

Places

FROM HERE TO ROI: Susan Steinbrink, Rosenbluth's director of consumer and strategic marketing, uses the Web to get the right product to the right audience.

a TV in the living room and recline in a high-tech airline seat with a built-in video monitor. You can inspect a hotel suite furnished with a desk and an office chair instead of a Victorian knockoff that leaves your butt feeling like you rode into town on a rail. In each constantly updated room, a multicolored text display describes Rosenbluth's predictions about where technology is headed for each aspect of travel. It also details Rosenbluth's plans to be there. The message of The Continuum is clear: Rosenbluth *loves* change.

"Change has always been good to us," says President and CEO Hal Rosenbluth. "It's not just that most companies are fearful of change, they are fearful of their inability to change. Most have neither the financial nor intellectual capital; the rest have one or the other."

With that sentiment at the top, it's not surprising that Rosenbluth has expended financial and intellectual capital to develop what promises to be the travel agent of the future (see "Behind the Scenes," Page 31). In doing so, it has not only created a Web site worthy of a WebMaster 50/50 award, it has also prepared for what could be one of the most profound changes to hit the travel industry in years—online commerce.

The ticket to success in this crowded new market is differentiation, a particularly tough assignment in a business where everyone sells the same product and almost everyone books that product through the same computer reservation system.

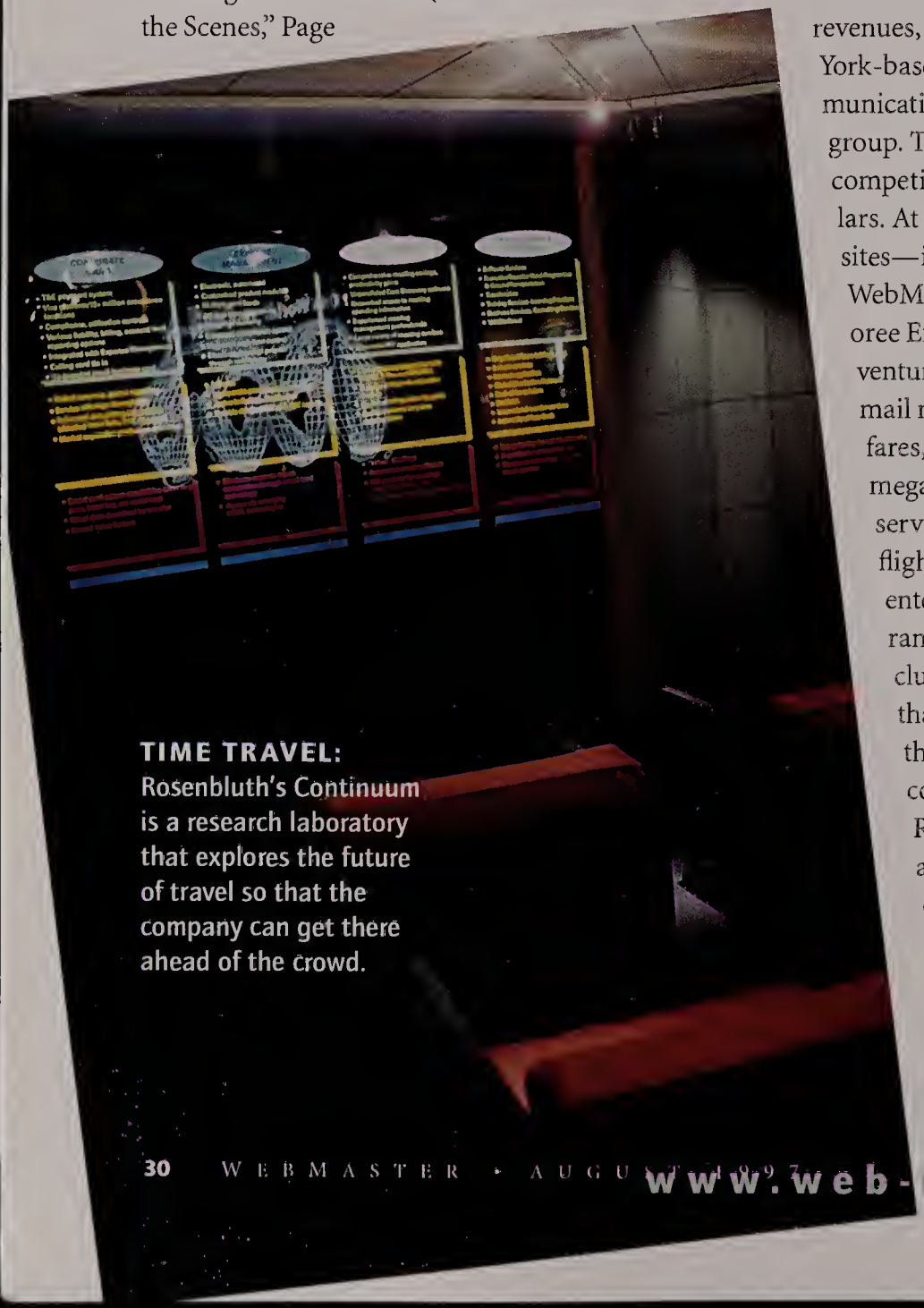
Last year, online travel brought in $276 million in revenues—a decent-sized chunk of the estimated $1 billion in total electronic commerce revenues, according to New York-based Jupiter Communications LLC research group. There is plenty of competition for those dollars. At least 40 travel sites—including fellow WebMaster 50/50 honoree Expedia, Microsoft's venture that sends e-mail notification of low fares, and Travelocity, a megasite with a paging service for last-minute flight changes—have entered the arena. The range of players includes businesses that exist solely in the ether as well as companies like Rosenbluth, which added a Web franchise to its 105-year-old travel business.

The Travelution Web site is the progeny of the 1996 redesign of a basic company site that had been around for about a year. After the redesign, the company's leisure travel division spun off, and it now operates as Rosenbluth Vacations. Under Lee Rosenbluth, former executive vice president at Rosenbluth, Rosenbluth Vacations launched its own Web site, The Savvier Traveler (*www.savtraveler.com*). And while that site is aimed solely at consumer travel, Travelution hopes to cash in on both corporate and consumer travel.

TRAVEL EXPERTS SAY THE TICKET to success in the crowded new market of online travel services is differentiation, a particularly tough assignment in a business where everyone sells the same product and almost everyone books that product through the same computer reservation system. For many sites, the differentiation relies on look and feel rather than content.

If those relatively subtle differences are the key to winning this online contest, Rosenbluth is the horse to bet on.

Travelution's most noticeable difference is its accommodating design and navigation. It doesn't, for example, attempt to subvert the user's purpose by running flashing banners about all the free stuff you can get if you book immediately. The site also offers many useful if not all unique functions: Visitors can book air, car, hotel, cruise and tour reservations online. They can get directions to any airport (as well as maps of the terminals). They have access to in-



TIME TRAVEL: Rosenbluth's Continuum is a research laboratory that explores the future of travel so that the company can get there ahead of the crowd.

Behind the Scenes

Technology helps those who help themselves

IT'S NOT SURPRISING THAT ROSENBLUTH HAS INTEGRATED its Web site into its identity so quickly and so successfully. Rosenbluth's technological savvy has produced several top-notch proprietary systems, such as the agentless reservation tool, E-Res, which has been put to work on the Travelution Web site.

E-Res, originally developed as a client/server program in partnership with Wal-Mart Stores Inc., allows employees of corporate clients such as E.I. du Pont de Nemours and Co. and Merck & Co. to book travel from their desktops. Now Rosenbluth has built a Web front end for this system so that new corporate clients will not incur the expense and administrative burden of deploying the software on their LANs. Employees whose companies have accounts with Rosenbluth can simply click to the public Web site, and the server on the Rosenbluth site automatically pulls up the customer profile—complete with the company travel policies and the person's preference for window seats. Because the corporate profile and credit card numbers do not pass over the Internet, security measures are unnecessary.

This system is a great advantage for corporate travel managers, who can track their companies' travel trends to negotiate group discounts. If, for example, a company routinely sends employees from its Dallas headquarters to its branch office in Miami, it might pursue breaks on hotel packages in the Miami area based on volume.

Res-Monitor is another Rosenbluth-developed system that helps the company give better service to more people. This low-fare search engine, not connected to the Web site, provides clients with the best price possible for every service booked. Unlike Sabre and similar systems, Res-Monitor is not linked to an airline computer reservation system, so it isn't hindered by the built-in biases that those systems create. Res-Monitor relies on a blend of information sources biased only toward the best deal. For example, you'll never get a recommendation from Sabre to change to a less expensive carrier in mid-route; you will get that from Rosenbluth.

–C. Dahle

ternational travel information, including currency exchange rates and a handy Shockwave applet that uses an audio playback feature to translate common English phrases into several other languages.

The site's clean design and smart writing is one result of the effort by Susan Steinbrink, director of consumer and strategic marketing, to be what she calls "the traveler's advocate." Exploring the Travelution site, one gets the impression that Steinbrink and the rest of the Web team at Rosenbluth have tracked more than a few users though the site and used that information to refine the navigation.

The other key to being an advocate for travelers is understanding what travelers want and giving it to them, Steinbrink says. "It's not just being a travel expert that's important," she says. "In this market, if you want to get repeat business, you have to get the right product to the right audience."

For Travelution, that audience is a combination of corporate customers, passersby on the Web and people directed to the site through AT&T WorldNet Service. On its Life & Travel page, WorldNet offers a direct link to Rosenbluth for travel booking, and about two-thirds of the site's traffic (nearly 2 million hits per month) comes through the AT&T partnership.

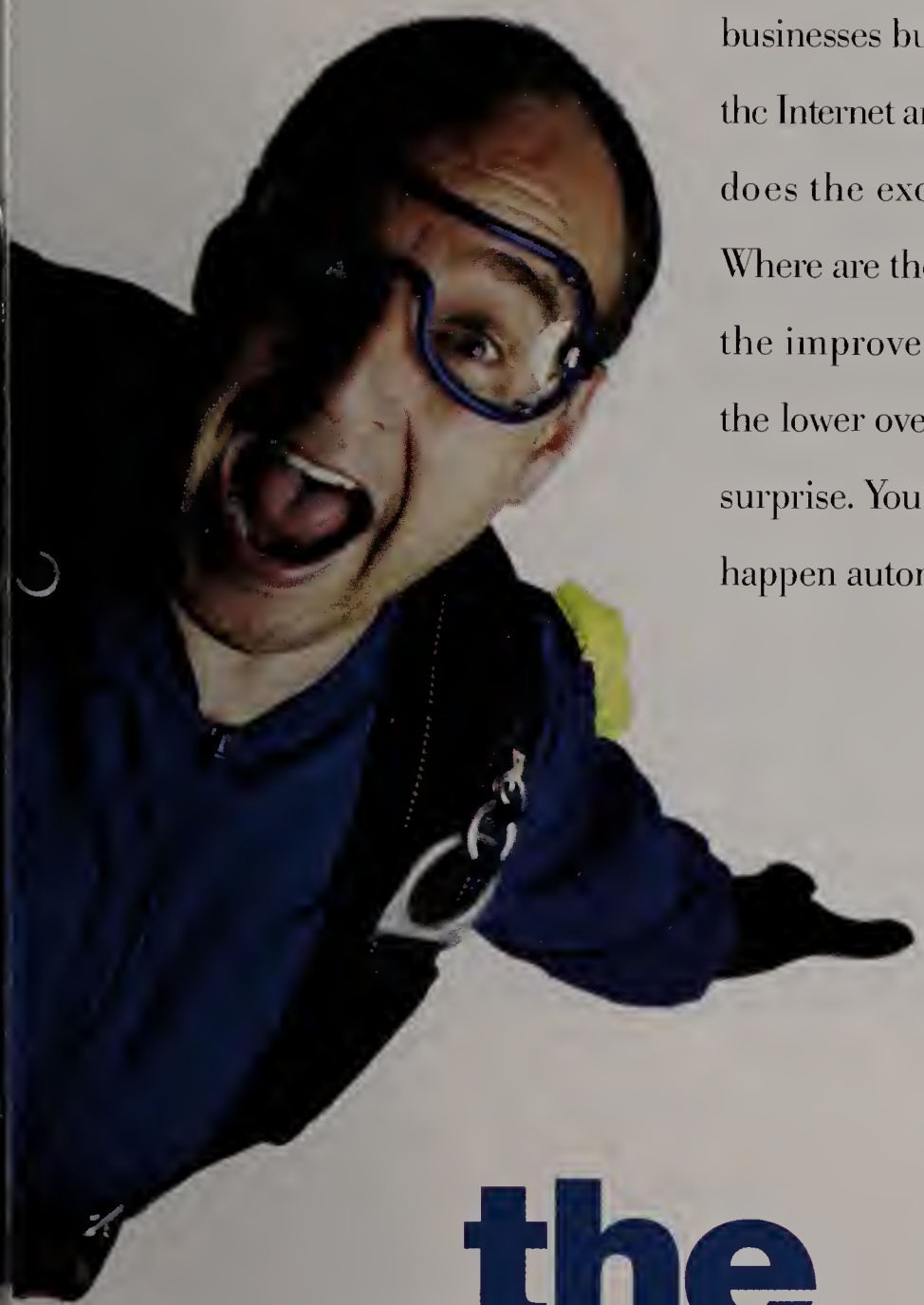
And in Travelution's case, that product means niches—the right niches. Scads of package deals to Florida during the spring break rush don't sell. Customized trips centered on the Indianapolis 500 or rafting through the Grand Canyon do. Rosenbluth capitalizes on that distinction with a specialty area under its Escapes section. There, you can expect to find packages for getaways to New Orleans during the city's wine and food festival or tours of national parks in the Southwest.

"We're never going to have 5,000 different vacation packages on our Web site," says Dean Sivley, vice president of marketing and chief information officer. "That would be against everything that we're about."

TRAVELUTION'S SUCCESS HAS BEEN measured so far in terms other than profit. It reaps more than 100 inquiries per week for offline services, including sales leads for the corporate travel business. It also has saved money for the company and its corporate clients by making information such as maps and airport directions available instantly and at no cost. And it has helped Rosenbluth capture more consumer vacation business without putting up additional storefronts.

Jupiter predicts that in the next four years revenues from online travel will grow to $6.5 billion, a plenty big pie to divide among the sites that survive the inevitable shakeout. While about 90 percent of 1996 revenues came from airlines tickets, by 2002 that number should drop to about 75 percent, Jupiter says, closer to the real-world air portion of all travel (see "The Sky Is Falling," be-

IBM and Solutions for a small planet are trademarks of International Business Machines Corporation in the United States and/or other countries. Other company, product and service names may be trademarks or service marks of others. ©1997 IBM Corp.



Each and every day, thousands of businesses build their sites on the Internet and wonder: When does the excitement begin? Where are the new customers, the improved relationships, the lower overhead? Surprise, surprise. You can't expect it to happen automatically.

the "yippeee... we're on the Internet! now what?" solution

It takes a solution. The good news is, a call to IBM can help put things in motion. **IBM Internet solutions** provide a unique combination of technology, professional services and know-how that's enabling a world of e-business opportunities, changing the way business is done. Here are a few customers already reporting results:

Japan Airlines: uses Internet reservations to boost ticket revenue by $4 million.

NHL®: online store attracts more than a million hits per month.

Arena di Verona: online ticketing expands opera house audience.

Supervox: French wholesaler finds an $8 million opportunity in previously untapped market.

Find out how **the Internet can transform your business.** Just drop by www.ibm.com/internetsolutions or give us a call at 1 800 IBM-7080, ext. NC01, for our free brochure on commerce solutions.

IBM®

Solutions for a small planet™

low). Part of that drop, Jupiter predicts, will stem from increased revenues from areas such as online advertising and other bookings, including hotel rooms. Rosenbluth, which already books car rentals and hotel reservations, is planning to add other service options to its package deals.

"The concept is to develop the attractive 'extra' offerings that satisfy the targeted customer demand for a complete vacation," says Sivley.

Coupled with intelligent agent technology, Rosenbluth's tracking of customer preferences could allow the company to recommend an Icelandic holiday to a visitor who enjoyed a cruise to Alaska.

NICHOLAS NEGROPONTE, A FOUNDER and director of the Media Laboratory at the Massachusetts Institute of Technology and author of *Being Digital* (Alfred A. Knopf, 1995), has speculated that the phenomenon of online travel will force travel agents back to their roots of being experts on tripping across the world rather than being mere transaction processors.

While Rosenbluth would perhaps take umbrage at Negroponte's dismissal of the value travel agents add to the transaction, the company takes to heart his point about the importance of knowing each customer's personal preferences. Rosenbluth currently tracks visitors with cookies that allow the site to greet users personally as they log on, and the company intends to expand the capacity to track user preferences even more closely. Coupled with intelligent agent technology, that could allow Rosenbluth to recommend an Icelandic holiday to a visitor who enjoyed a cruise to Alaska, for example.

Such sales pitches may creep dangerously close to the hawking of "Big Savings Now" found on competing Web sites, but Rosenbluth says the sense of personal relationship between customer and agent will render its own pitches more palatable. It's a risk, but as Steinbrink admits, the Web world is full of risks. She isn't worried. "Web development is a really fun business to be in if you can deal with risk," Steinbrink says. "We happen to love risk." WM

Associate Editor Cheryl Dahle can be reached at cdahle@cio.com.

The Sky Is Falling

Airlines' commission caps send online travel sites into tailspin

THE SKIES ARE NONE TOO friendly for online travel sites these days. Last summer, major airlines began capping commissions to online travel agents and, in some cases, offering straight flat rates to agencies for online bookings rather than following the percentage commission system under which the airlines pay for transactions enacted with a live agent.

Before the commission squeeze, online bookings generated 10 percent of the ticket amount, capped at $50 for domestic flights. Northwest Airlines Inc. began the trend, cutting commissions to 5 percent of the ticket price, with a $25 cap. Continental Airlines followed suit. American Airlines Inc. has since cut it to a flat $15 per booking. United Airlines Inc. has cut it to $10 flat fee.

The airlines point out that booking tickets over the Internet is cheaper for agencies than having live agents do it. Travel sites don't dispute that, but they claim that the new reduced rates will make it impossible for them to recoup their investment costs.

So far, the lower rates have forced one travel site, PCTravel Inc., billed as the first Internet travel site, to call it quits.

American Express Co. has stopped booking tickets electronically for United, Northwest and KLM Royal Dutch Airlines. Web users who try to book flights online are directed to AmEx's 800 number, so the company can collect the traditional commission.

Dean Sivley, Rosenbluth International's CIO and vice president of marketing, says his company's Web site will not follow suit, although he is frustrated over this development.

"There is a service aspect to it that you cannot provide at $10 or $15 per transaction," Sivley says. "Airlines presume that consumers don't call in with problems or questions, that they travel with an e-ticket and that they come to your site only once and immediately book. Well, it just doesn't happen that way."

Sivley is not the only one speculating that the move was based primarily on airlines' interest in selling tickets through their own Web sites.

"They will slow the growth of the online electronic commerce world of travel," says Sivley. "That is probably the opposite of what they were trying to achieve."

–C. Dahle

CIO

Sun microsystems

Funding, Framing and Constructing Your Strategic Intranet

The only executive intranet program exploring technology, culture, business use and investment, in combination with real world experience and leading practices in strategic enterprisewide intranet creation.

Where

Sept. 22-23 **New York, NY** Sept. 24-25 **Chicago, IL**

day One

Intranets for the Other "O's"

AFTERNOON HALF-DAY EXECUTIVE PROGRAM

CIO and Sun Microsystems have teamed up to provide an extraordinary 1/2 day briefing for non-technical executives with involvement or oversight of their enterprises' intranet strategies. Topics include demographics, trends, benefits, ROI, security, case studies within IT and non-IT functional areas and technical and organizational challenges.

day Two

Achieving Your Strategic Intranet

FULL DAY PROGRAM

Explore the impact, benefits and limitations of a strategic intranet on your business. Topics include critical Internet/intranet distinctions, scalability, an intranet reference model, intangible benefits, collaboration and electronic commerce. Discuss a framework for action and the future of the technology.

discussion Leaders

Tim Horgan
Vice President
Technology
CIO Communications, Inc.

Dennis Tsu
Director
Internet and Electronic Commerce Marketing
Sun Microsystems, Inc.

How

For more information, please visit our Web site at *www.cio.com* or call us at 800 355-0246.

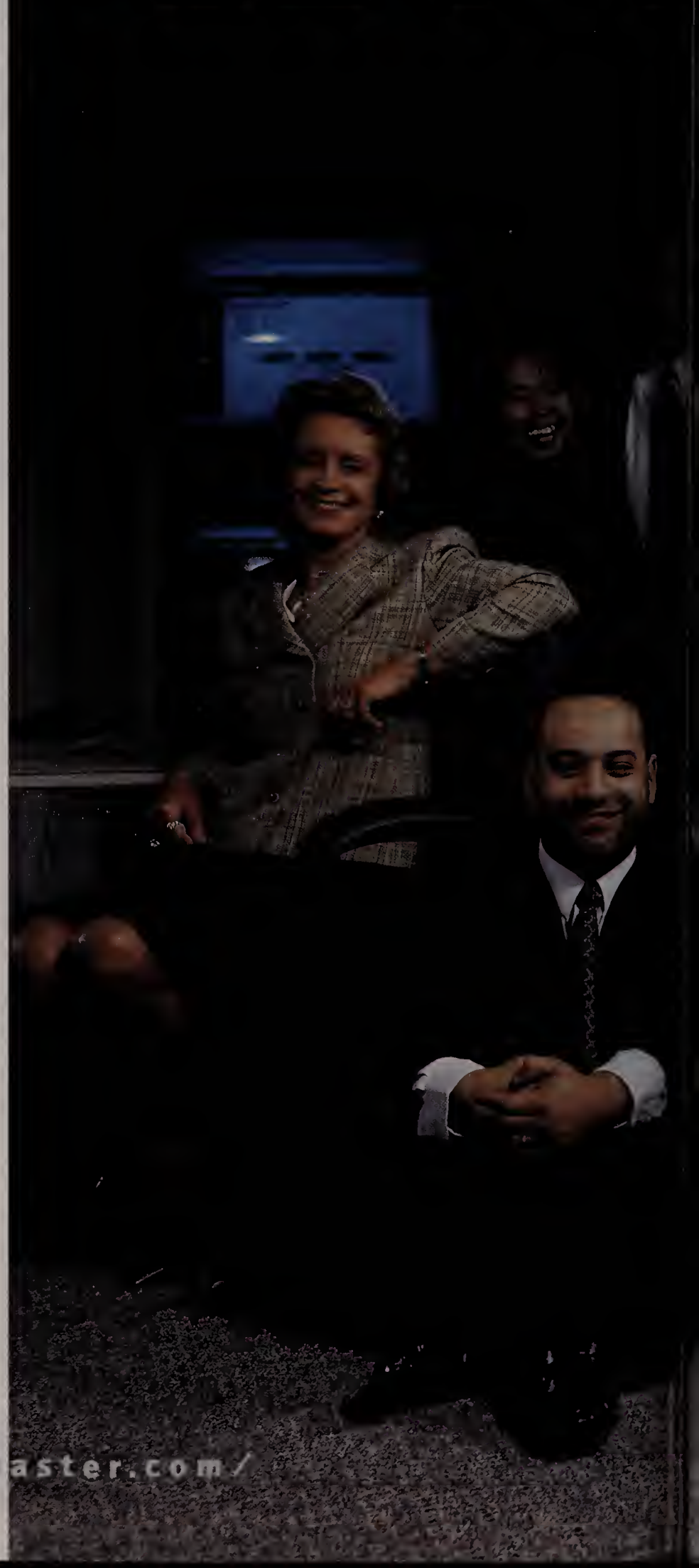
Capita

A prize-winning intranet moves GE Capital toward its ideal "boundaryless" workplace

By Jennifer Bresnahan

Katherine H. Artrip was flattered when General Electric Capital hired her away from Andersen Consulting in May 1996 and asked her to build an intranet for the $227 billion Stamford, Conn.-based service arm of General Electric Co.

"I was young," says Artrip, GE



www.web-master.com/

Gains

GE WHIZZES: (front, seated l to r) Charlotte Peterson, Ed Daly, John McKinley Jr., Katherine Artrip; (standing l to r) Lam Tran, Christopher Quinn, Ken Ramaley, John Elsinger, Thomas Kramer

Photo by Paul McGuirk

Until the intranet was put in place, boundaries abounded in GE Capital's supposedly boundaryless walls.

Capital's manager of intranet technologies. "I didn't know."

But she learned quickly. She learned, for example, that she would have the assistance of only three people, one of whom was an intern. And she learned that GE wanted the intranet up and running by the end of July. So for the next eight weeks, Artrip's days were spent in meetings with managers whose departments would be represented on the site, and her nights were spent writing content. In the morning, Artrip would hand over her night's work to a helper, who would translate it into HTML while she ran home to catch a couple of hours of sleep.

"I had to remind her to breathe," Tobi Van Wormer, a consultant with IMI Systems Inc., who was hired to help oversee the construction.

By the end of July, Artrip and her tiny team had done it. Their GE Capital Network had 500 pages of content and five collaborative applications, including forums, a library, networking and event registration.

In fact, GE's intranet, a WebMaster 50/50 honoree, did exactly what a winning intranet should do: It provided the resources to help GE employees do their jobs as well as possible. For the first time, GE's 27 business units could share best practices and benefit from other business units' experiences. Artrip estimates that having access to other business units' projects has reduced the workload of hundreds of employees by 50 percent because they no longer have to constantly reinvent the wheel.

Perhaps most important, it has moved the company a great deal closer to the notion of a "boundaryless" workplace, the kind of workplace in which employees at all levels and in every business unit can easily share their knowledge and skills with all others, and the kind of workplace envisioned by Jack Welch, CEO of GE Capital's parent company, General Electric.

Until John A. McKinley Jr., GE Capital's chief information and technology officer, put the intranet wheels in motion, boundaries abounded in GE Capital's supposedly boundaryless halls. The company's 27 business units are cast over 57 countries and employ more than 52,000 people. They are as diverse as consumer services such as prepaid long-distance calling cards and equipment management (everything from shipping containers to satellites), midmarket and specialized financing, and specialty insurance. Included under the GE Capital umbrella is the world's largest fleet of airplanes, Stamford-based GE Capital Aviation Services, which leases to major airlines; the largest credit card issuer, Retailer Financial Services in Stamford; and the third-largest insurance company in the United States, Richmond, Va.-based Consumer Savings and Insurance Group.

HISTORICALLY, each GE Capital division had been highly autonomous, and compared with divisions in many modern companies, they worked in relative isolation. There was no common platform and communications system—not even a universal phone directory. If, say, a GE employee in Australia happened to learn of a GE employee in the United States with experience pertinent to his project, he wouldn't necessarily have been able to find her phone number.

Artrip realized quickly that Welch's ideal of boundarylessness was a long way off, but she had to start somewhere. The first thing she did was develop a phone directory and an expert database so that people could find one another. Today GE Capital employees continue to use their own platforms and systems, but they are linked via a Netscape Communications Corp. Web server running Sun Microsystems Inc. Solaris.

She also realized that cross-company collaboration was impeded by things other than technological inadequacies: Business units were afraid of giving away competitive secrets.

www.web-master.com/

"We have some 27 businesses, many of which compete against each other," says Corporate Webmaster John Eisinger. "No one trusts each other."

Mindful of that fear, Artrip built into the GE Capital Network technical and procedural mechanisms low-risk ways of sharing examples and best practices. If a business unit would rather not reveal something, it can hide its data behind a firewall or post case studies using fictitious numbers. And to embolden people to overcome their competitive instincts, GE Capital management instituted a practice that informally based promotions and raises on how well employees share their knowledge online.

In addition to the boundaries between business units, hierarchical boundaries within a single business often persisted for reasons of simple practicality.

"When something happens that four or five people at the top must know about and four others below would like to know [about], in the old days when that meant sending out nine separate faxes, you would've sent it only to the four who really needed to know," says Ann Stern, CEO of GE Capital's New York-based Financial Guaranty Insurance Co. Today, the intranet makes it easy to get all relevant information to all interested parties.

"Our customers expect us to be experts and to know what's going on with their other relationships within GE," says McKinley. "This is a real differentiator."

That great opening of the gates naturally helps GE Capital in its pursuit of the goal that Jack Welch seems to live for: quality. Since the beginning of 1996, Welch has been pushing for GE to reach Six Sigma, the quality control program developed by Motorola Inc., which permits no more than three or four defects in every million products or services. Anything less could cost GE 10 percent to 15 percent of its revenues, roughly $12 billion a year. That push for quality came into existence around the same time as the intranet and would not have been possible without it, according to Stephen Belstio, assistant vice president of quality at GE Capital's Stamford-based Equity Capital Group. In the beginning, most of the quality people in the business units and the corporate quality department were either new to the company or to the Six Sigma quality concept and didn't know where to go for guidance. Best practices were not shared, and work was duplicated in each division. Now, the GE Capital Network provides them with a library of resources and relevant links, ready-to-use template and calculator tools, a help desk and discussion forums on such topics as determining the value of customer retention.

About 600 people with user IDs and passwords can access the section containing global best practices in quality, a resource Belstio has found invaluable in streamlining operations in each of his business unit's four core processes: sourcing new deals, evaluating deals, closing deals and managing those assets. When Belstio or his colleagues need to research such topics as ISO 9000 or competitive benchmarking, they search the expert database to find a colleague who knows about it.

"An original process is different in our business and aircraft engines or retail services," he says. "But there are a lot of similarities we can leverage. What they do very well might benefit us."

And vice versa. It was through the GE Capital Network that GE Financial Services learned about Belstio's efforts to improve cycle time over the intranet and realized that the same methods and ideas could be applied to its own process of approving or rejecting credit card financing deals. Not only did the financial group extrapolate value from what the Equity Capital Group posted on the intranet, but because of the new climate of sharing they were able to convince the financial group to make a formal presentation and workshop on how to improve cycle time.

Artrip also designed the intranet to provide employees with several important outside sources of information such as Dun & Bradstreet Inc. and *The Wall Street Journal*. And while such subscriptions cost the company about $500,000 annually, that figure, says Artrip, is more than covered by the cost and time savings of having one team rather than many negotiate bulk contracts for the entire company. Any GE Capital employee with a manager's permission can access this external content.

"The market moves fast," says McKinley. "Events happen from unexpected places that affect our business. This service allows us to keep up with things."

FEW PEOPLE AT GE know that better than GE Capital's Stern. The first time she used the intranet, she had a dinner meeting with the president of a company that her organization was interested in acquiring. Normally on such occasions, she would have asked a corporate librarian to research the prospect. But two hours before dinner, she realized she had neglected to do her homework. Stern logged on the intranet, checked out the news services and market reports, and recommended Web links; 20 minutes later, she walked out of the office armed with conversational ammunition designed to impress, such as where this individual vacationed and which political party he favored. "Everything I needed was right there," she says. She got the contract.

Stern's company also uses the site as a project management and job tracking tool. When any GE Capital business acquires another company, it forms a team of people from within the business unit and the company being acquired. The team also includes people from GE Capital's corporate department and other business units that have expertise in key areas, such as pertinent legal issues. Not surprisingly, staying in synch is much easier now that the teams can post important documents and communicate over the intranet. And the site's expert database greatly simplifies finding individuals with the right skill sets.

Cross-company collaboration was impeded by more than technology: Business units were afraid of giving away competitive secrets.

Similarly, Carol Ashton Hergenhan, vice president of GE subsidiary Consumer Savings and Insurance Group, relies on the intranet to target pitches to retail companies. For example, if Hergenhan were to approach Wal-Mart Stores Inc. with a pitch to sell credit insurance to its customers, she would learn as much as possible about the company by pulling down information from Dun & Bradstreet as well as company news and press releases. Previously, she would've had to sacrifice an employee for an entire day to research at a university library in the area.

The GE Capital Network also helps such internal service functions as HR stay close to the employees they serve, a faculty that helps keep morale high and misinformation low. All new developments from each business unit and corporate department are posted on the intranet. This is especially valuable in GE where so much merging, acquiring and selling goes on that one can never be sure from day to day just how many business units there are, says Artrip. "It makes you feel a part of the overall system," says Belstio. "Before, we'd hear about something a month later through the rumor mill." Employees can also register for training classes online, find jobs in other business units and subscribe to a personal news service, a welcome improvement over the old system of posting "pockets of information" on bulletin boards outside each business unit's HR office.

Several departments, encouraged by the success of the intranet, are now busily dreaming up ways they can exploit it. The creative services department, for example, the graphic design and promotional materials arm of GE Capital, is looking to the intranet as an internal marketing vehicle. For the first time, they can showcase past projects in an archive library.

"This is going to be our big chance," says Albert Paolini, graphic designer at GE Capital. "We've never run a brochure showing our capabilities before. But for the first time, we're going to do it on the Web instead of on paper. We're trying to take advantage of the excitement associated with the intranet [to let people know what we can do for them]."

How was GE Capital able to create an intranet so dead on the mark? Much credit goes to the energy and (originally blind) faith of the folks who put it together. But perhaps most important, the intranet team had the full support of GE Capital management, whose backing was not merely symbolic. When the quality library wasn't being populated as quickly as Artrip would have liked, for example, she persuaded the vice president of quality to declare that the library was the only acceptable vehicle for communication. And by tying performance evaluation in every business unit with intranet participation, the management infused the project with legitimacy.

Artrip also made it easy to (and inexcusable not to) jump on the intranet bandwagon by providing departments with an "intranet in a box" development tool.

Beyond that, what really made the difference was the team's strict attention to the needs of the business user. Whenever a new department or business unit wants to develop its own intranet pages—something that now happens on a daily basis—Artrip conducts interviews and polls to understand their needs and assess whether they're ready to build and maintain an intranet site.

Fortunately for Artrip and her fellow workaholics, GE Capital Network, like all good intranet sites, will never be finished. The team continues to churn out pages. It's gotten to the point where Artrip can't even keep track of how many departments are represented on the site. Intranet Technologies Leader Ken Ramaley, meanwhile, is investigating new technologies, such as Lotus Domino to replace the site's original C++ coding.

"Right now, we have a lead with our intranet," says McKinley. "But no lead lasts longer than three to six months. We've got to keep running every day." WM

Senior Writer Jennifer Bresnahan can be reached at jbresnahan@cio.com.

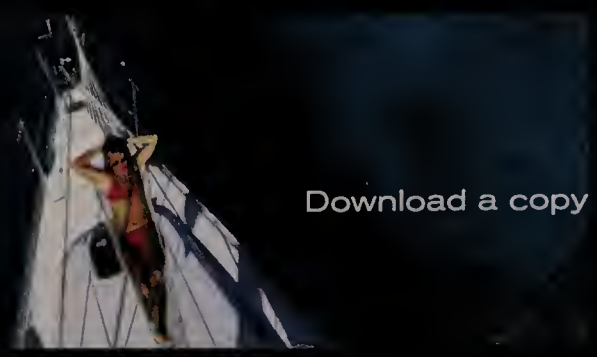
Sure, you're going to the web. But just how are you planning to get there?

How long will it take and how many of your

applications will survive the trip? You think this is going to be easy? Only if you use ForeSite™.

The ultimate software solution for systems migration to the web. Powerful. Scalable.

Fluent in many languages. What are you waiting for? You're not even going to break a sweat on this trip.



centura™

Download a copy of ForeSite at www.centurasoft.com/products/foresite.

OWNING UP: James Walter Martin III began experimenting with a Web server on his desktop two years ago. Today, his staff of five maintains a network that serves 60,000 page views a day to 8,000 Chubb employees.

Inner Beauties

Photo by John Rae Illustrations by James O'Brien

www.web-master.com/

Every intranet honored in the WebMaster 50/50 saves time. Most save money. A few save lives. Here are the winners, and a few revealing snapshots of intranet efforts that give far more than they take.

Loose Change

WHAT STARTED TWO YEARS AGO AS ONE MAN'S pet project now connects more than 8,000 people, delivers corporate newsletters using push technology and serves up 60,000 page views a day. In 1994, a just-out-of-college mainframe claims programmer named James Walter Martin III arrived at **Chubb** and decided one thing the giant insurance company really needed was an intranet presence. Even though he didn't have an official directive, he went ahead and transformed his OS/2 desktop machine into the intranet hub, installed a Web server and created a search engine.

"My first instinct was to get up and run," Martin recalls of the initial lack of support for his idea. "But instead, I made it my mission to change the mind-set of Chubb's IS people."

Martin's first effort attracted attention, if not awe. The intranet used shareware and an Apache Web server and ran from his desktop PC.

After what Martin describes as "some grass-roots promotional efforts," other employees started contributing content, and some even cranked up their own Web servers.

"Being able to run the intranet from my desktop using the same equipment as everybody else and without any commercial software was a significant statement," he says.

Eventually, that statement was heard in all the right offices, where it be-

Top 50 Intranet Sites

American Red Cross
Crossnet
Crossnet ties together 1.5 million paid and volunteer workers around the United States, forming a powerful online community. A searchable database keeps track of members. As e-mail replaces faxes and paper mail, the organization expects to save millions in administrative costs.

Apple Computer Inc.
AppleWeb
The AppleWeb intranet resulted in substantial cost savings by eliminating distribution of printed materials such as employee directories and newsletters. The site also simplifies project work with tools such as shared online calendars and discussion forums.

AT&T Corp.
Intranet Catalog Software Integration
This categorization and navigation system cuts search times in AT&T's mammoth information galaxy by up to 20 percent. Time saved equals money saved.

Bassett-Walker Inc., Lee Printwear division
Tailored Information Exchange Network (TIENet)
To better compete in the cutthroat garment manufacturing industry, Lee Printwear uses TIENet to cut costs and boost loyalty among distributors. The extranet helps partners minimize inventory levels by allowing online ordering and providing quick answers on product availability.

Black & Veatch
Black & Veatch 3-D Modeling Project
Formerly restricted to expensive Unix workstations, this intranet application allows engineers to view 3-D models of power plant components using a desktop browser. The application will be extended to customers in hope of improving workflow and creating new business opportunities.

Boeing Commercial Airplanes Group
Boeing Wichita Information Systems People Web Site
Designed to promote leadership and mentorship opportunities, this site extends the organization's knowledge management capabilities. It's also used to track existing critical business areas and forecast emerging trends.

Cabletron Systems Inc.
Ctron-World
Dedicated to delivering crucial corporate information to Cabletron staff worldwide, Ctron-World has cut the number of internal customer support calls by half, and overseas employees can now catch up on briefings from the United States offices at their convenience.

came apparent that Martin had started a movement that not only was rapidly gaining popularity, but could save the company time and money.

Consequently, Martin now heads a five-person staff and oversees both the intranet and the corporate Web site for Warren, N.J.-based Chubb. His old desktop intranet, now grown into a giant known as ChubbNet, offers e-mail service for most of the company. ChubbNet uses extranets to connect to some of the company's brokers and other business partners, who need up-to-the minute information on policies and prices.

ChubbNet's Claim File Review extranet lets some of the company's larger customers check the status of their claims, saving service costs. And by allowing access to free Web-based information sources, the system has reduced Chubb's reliance on several fee-based research or online services, such as Lexis-Nexis and CompuServe.

In fact, most reference materials, once buried under layers of obscure interfaces, are now available through a single, familiar interface, the Web browser. ChubbNet also is beginning to use cookies to serve up content based on user preferences.

Although Martin set out to change the mind-set of Chubb's IS people, he succeeded in changing the mind-set of the entire company. ChubbNet engendered a new way of working by enabling employees in one business unit to investigate ideas and make suggestions for those in other units.

–Johan Gustafson

Throwing Away the Book

When Lockheed Martin Corp. married Loral Corp. in 1996, the newly blended family included 180,000 employees and a company with roots in 18 enterprises.

For someone like Saul Zatz, a senior staff systems integrator in the Distributed Computing and Telecommunications (DC&T) organization of **Lockheed Martin Enterprise Information Systems** (EIS), the mere thought of those numbers was enough to produce a first-class headache. Zatz oversees the documentation of all service-level agreements between DC&T and the aerospace-defense contractor's various companies. It's not an easy task: Those services—all 28 of them—employ more than 4,000 people and include areas such as Unix administration, basic desktop support and PC procurements.

Before the merger, documentation required producing a multi-volume paper report the size of a major metropolitan phone book, then distributing it to hundreds of people. After the merger, an even larger document went to thousands of people.

"I asked myself how it could be done differently," says Zatz, who is based in Orlando, Fla. "The answer I came up with was Web pages."

Zatz's solution took two people six months to create, but when they were done, the bulky service-level agreement had become a dynamic and interactive Web document christened the Site Services NoteBook (SSNB). These days, the site details the support EIS has agreed to supply and records the service performance. The dynamic service-level agreement is

Case Shiller Weiss Inc.
Case Shiller Weiss Extronet
With this extranet, the company dramatically cut the turnaround time for its primary product, property valuation reports. The fast and easy new interface has resulted in greater efficiency and encouraged customers to experiment with new uses for the information in the reports.

CH2M Hill
CH2M Hill Virtuol Office
Knowledge management is a crucial use of consultancy CH2M's intranet. The Virtual Office also features news, financial information, updates and a project workflow area. Prior to Virtual Office, project management information in the management information system was often a month old. Now it's never older than three days.

The Chubb Corp.
ChubbNet
ChubbNet started out as renegade intranet hosted on one employee's PC. Today, the insurance company's unusually decentralized intranet links 10,000 employees in all departments around the globe. It saves many thousands of dollars by reducing dependence on fee-based information services.

Cisco Systems Inc.
Cisco Employee Connection
The Cisco Employee Connection links 10,000 people and boasts a wide range of applications. Employees can enroll in online training courses at their convenience or watch broadcasts of company meetings. The Connection also offers document-management features yielding lower costs and improved business information.

Eastman Software Inc.
Eastman Software Knowledge Exchange
The company keeps sales presentations on the extranet, making them easier to update. The Knowledge Exchange automatically checks documents' expiration dates, providing faster and more reliable sales information.

Electronic Arts
Electronic Arts Intranet
In launching its intranet, this video game publishing house finally established a reliable internal communications system accessible from all platforms. EA's intranet also has provided a single ideal channel for employee updates on everything from benefits to phone listings.

Exide Electronics Group Inc.
Exide Electronics Soles Web
The company uses its expanded intranet to provide its 700 internal and external salespeople worldwide with easy access to product documentation. Sales Web also enables salespeople to order collateral materials online.

Ford Motor Co.
Ford Intranet
Ford's intranet was designed to transform a company culture forged in the early years of the 20th century. So far, with at least 80,000 users worldwide, it has proved invaluable in disseminating and updating critical information—and eliminating tens of thousands of pages of outdated paper documentation.

www.web-master.com

GE Capital Corp.
GE Capital Network
This comprehensive intranet enables GE Capital's 27 far-flung business units to collaborate and share best practices and lessons learned, improving productivity, efficiency and, ultimately, the organization's competitive position.

Hagler Bailly Inc.
Business Information and Knowledge Exchange (BIKEnet)
A user-centric effort, BIKEnet serves Hagler Bailly's globe-trotting consultants by letting them work at their convenience, not just when the U.S. offices are open. It also channels software, documents and research requests.

Hewlett-Packard Co.
Electronic Sales Partner (ESP)
ESP saves HP's worldwide computer systems sales force $25 million annually in productivity gains. Featuring an up-to-date reference database, product presentations and access to strategic documents, the intranet provides a one-stop source for its 6,000 field users.

Hewlett-Packard Co.
Field Guide to TMO Products
This site serves as a one-stop product information site for a sales force selling merchandise from 29 HP divisions. HP officials say the intranet has saved a great deal of time. And time is money.

Indiana University/Purdue University Indianapolis
Eclipse Help Desk System
The Eclipse Help Desk System helps organize the IT support for 100,000 students and faculty members at Indiana University/Purdue University Indianapolis. On the user end, the intranet accepts support requests and automatically puts them in the proper queue. On the IT staff end, Eclipse allows for on-the-fly updates of client databases as well as the building of dynamic database queries.

Informix Software Inc.
OneSource
This field-sales support site allows employees to share presentations and proposals across borders and staff to contribute content easily. All presales material has been put online, resulting in time savings.

PHOTO BY KENT HANSON

SMOOTH AS SILICON: At SGI, Lori-Leanne Parris helped build an intranet that cuts the time to process purchase orders from three weeks to five days.

credited with increasing performance by 15 percent and has become an important reference for the annual budgeting process.

"It's really a management tool," says Zatz, who serves as the SSNB's webmaster. "From the home page, [users] can easily access a list of all services they're buying." A hot link then takes them to a definition for every service—a collection of more than 200 Web pages, stored in one place for easy updating.

As for corporate culture, placing more information on the intranet seems to help standardization, a distinct advantage for a company that's growing like Topsy. The only downside in some customers' minds: They can see their own services as well as those of other customers. "This has made some things more visible," says Zatz. "Some people don't like that."

–Johan Gustafson

Graphic Example

THE SILICON GRAPHICS INTRANET BOASTS A 1,400 PERCENT RETURN on the company's investment, according to a report by International Data Corp., a sister company to CIO Communications Inc., which publishes *WebMaster*. That estimate includes an annual savings of $50,000 in printing costs and more than $1.5 million in time savings.

But those numbers are small change compared with the savings the in-

tranet brings to tasks such as administrative work and sales training, says Lori-Leanne Parris, SGI's intranet program manager. For example, when new employees are hired, an administrator or hiring manager can set up office and communications services in 15 minutes rather than in the two hours it takes without the intranet. And most workers can now process purchase orders in five days instead of the three weeks it takes offline. Parris says the second version of Silicon Junction, SGI's intranet, takes over routine administrative activities, freeing employees to do more intensive work. All told, says Parris, the intranet saves the company millions of dollars a year.

"We've raised the bar for each employee in terms of the levels of tasks that they perform. Some of the lesser tasks don't need to be performed," she says. "You don't need to spend a lot of time on the phone to get information. You don't need to run to a conference room to see what equipment is in there. That information is on the Web."

SGI, based in Mountain View, Calif., began to develop its intranet in 1992 by internally posting product and service information. As the Web grew in importance, the company started to look at other ways to use the technology, including Pole Vault, an extranet service that gives SGI's employees access to pertinent business-process data; and OnLineHR, a Java-based database application that helps employees maintain and control human resources and benefits information. Parris says the third version of the company intranet, scheduled for completion some time this year, will offer even more functions.

Even as SGI plans to expand its intranet and extranet capabilities, Parris says, the company needs to rein in Silicon Junction's explosive growth. With more than 1,200 Web sites and 400,000 individual pages accessed by 11,000 employees in 40 countries, Silicon Junction is becoming a bit unwieldy. "If there aren't controls, you also end up with some chaotic instances," Parris says. "The next release really focuses on organizing information and targeting audiences."

–Heath Row

Saving Graces

When floods ravaged the Midwest this spring, **American Red Cross** volunteers were there, as they have been for decades, constructing dikes and comforting families. But this time, the nonprofit agency operated a little differently, beginning with the way it sent out its all-points bulletins for help. Far fewer faxes and phone calls went out to about 1,300 Red Cross chapters across the country. Instead, Red Cross headquarters in Washington posted daily messages about disaster efforts and needs on Crossnet, the agency's new intranet. And this year, the Red Cross had many more volunteers and more paid staff working with flood victims, says Thom Gibb, the intranet team leader shepherding Crossnet to maturity.

"I can't attribute that solely to the intranet," says Gibb. "But the intranet is one of the factors that helped, and it helped get the people needed most." For instance, some flood-ravaged areas particularly needed mental-health specialists. "On the intranet, we were able to target that type of volunteer," Gibb says.

The intranet offers the Red Cross several advantages over the traditional

KN Energy Inc.
Energy Market
When KN Energy moved its customer bulletin board from a legacy system to the Internet, transaction costs dropped 75 percent. The Energy Market site allows real-time coordination of the gathering, storage, transportation and delivery of natural gas via the company's pipelines.

Legg Mason Inc.
Legg Works
For financial securities company Legg Mason, efficient document management underlies every attempt to make the business more effective. Legg Works empowers employees to create and post new documents and provides an easy-to-use interface for quick access.

Leon County (Fla.) Schools
Leon District Public Schools
Florida's Leon County public schools use an intranet as an inexpensive, efficient way to provide information to staff, parents and others who need to know. Content ranges from curriculum materials to cafeteria menus.

Lockheed Martin Enterprise Information Systems
Site Services NoteBook
Lockheed Martin transformed the manual, paper-based process that recorded service-level agreements into a dynamic intranet site, allowing its users to answer questions such as, "What did we promise to do? When must we do it? Are we meeting our efficiency goals?" The result is a powerful, money-saving management tool.

Luella Hannan Memorial Foundation/Wayne State University Institute of Gerontology GeroInformatics Workgroup
ezSIS Senior Information System
This extranet site brings together a multitude of services and information targeted to Detroit-area senior citizens, and collects resources for the gerontological research community.

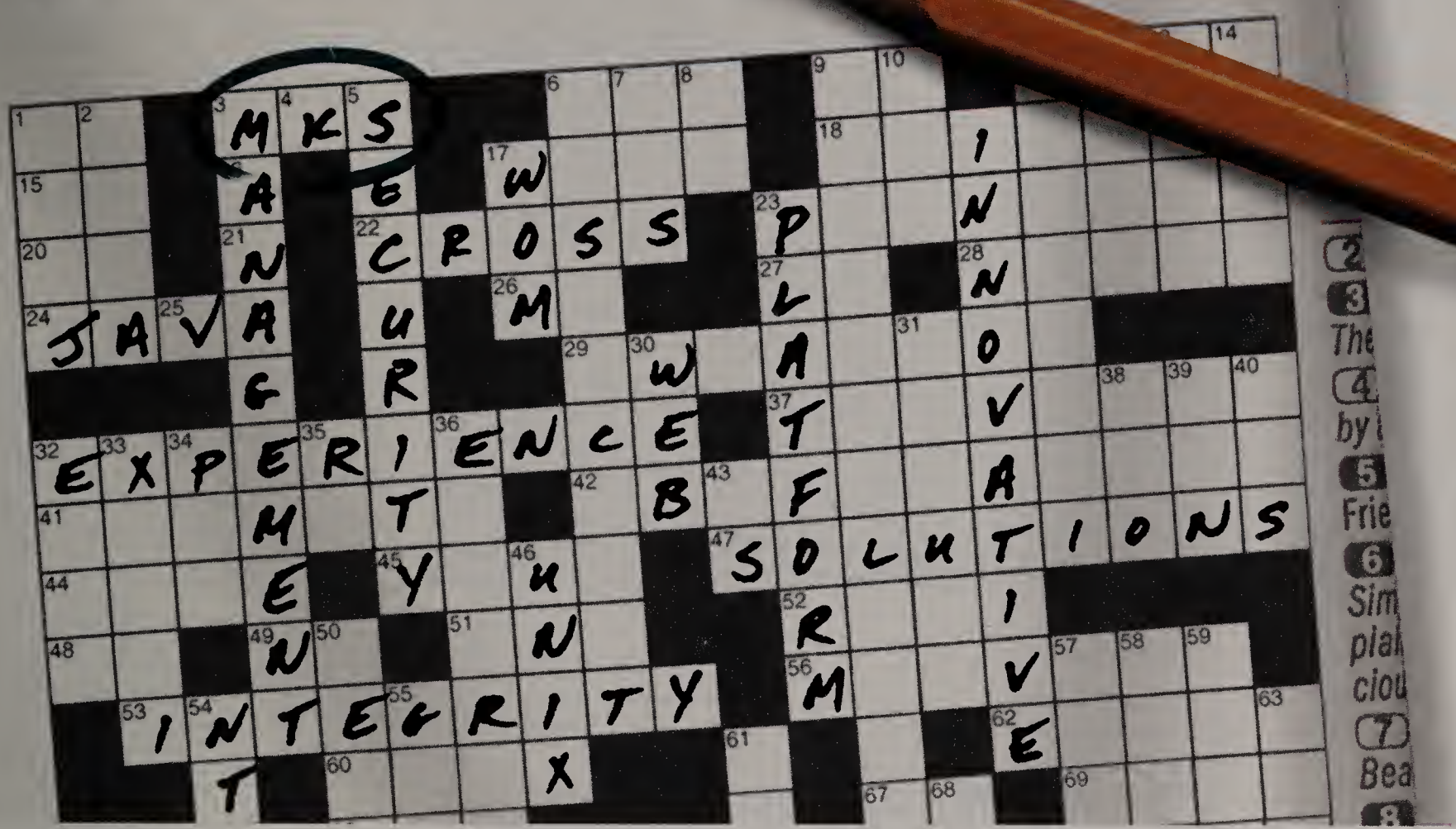
Maritz Inc.
Let's Talk!
This site illustrates how knowledge sharing can help companies stop reinventing the wheel. Maritz salespeople can tailor online sales presentations for individual pitches. Maritz says the site cuts the cost of preparing a pitch by 25 percent.

MCI Communications Corp.
Network Integration & Standards—PAVE (Performance Analysis View Engine)
The PAVE intranet allows MCI's operations, construction and network management organizations to monitor, configure and perform inventory functions on its SONET transport network. Selected users will be able to access network equipment remotely.

Motorola Inc.
A Document Repository (ADR)
With a "zero-dollar-per-seat" administration cost, Motorola's ADR is a perpetuum mobile of document-management systems. The user-driven system makes files accessible globally and by all platforms but leaves access control with document owners.

www.web-master.com

What's a Three-Letter Word For...
An Industry-Endorsed Intranet Company
You'd Trust YOUR Web Site To?



OPEN SOLUTIONS CODE PARTNER POWERSOFT

NETSCAPE Alliance DEVELOPMENT PARTNER

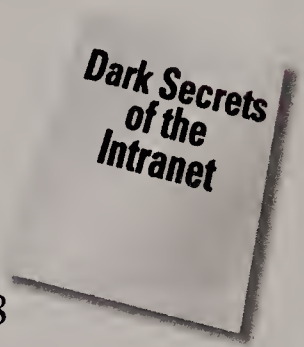
Microsoft Enterprise Development Partner

IBM

HEWLETT® PACKARD

For proven, reliable solutions for managing Intranet content and client/server source code, MKS is the only answer. Our name is trusted by market leaders worldwide for award-winning products that help solve even the most complex Intranet challenges. That's what we call managing change with integrity. And it all starts with three simple letters: MKS.

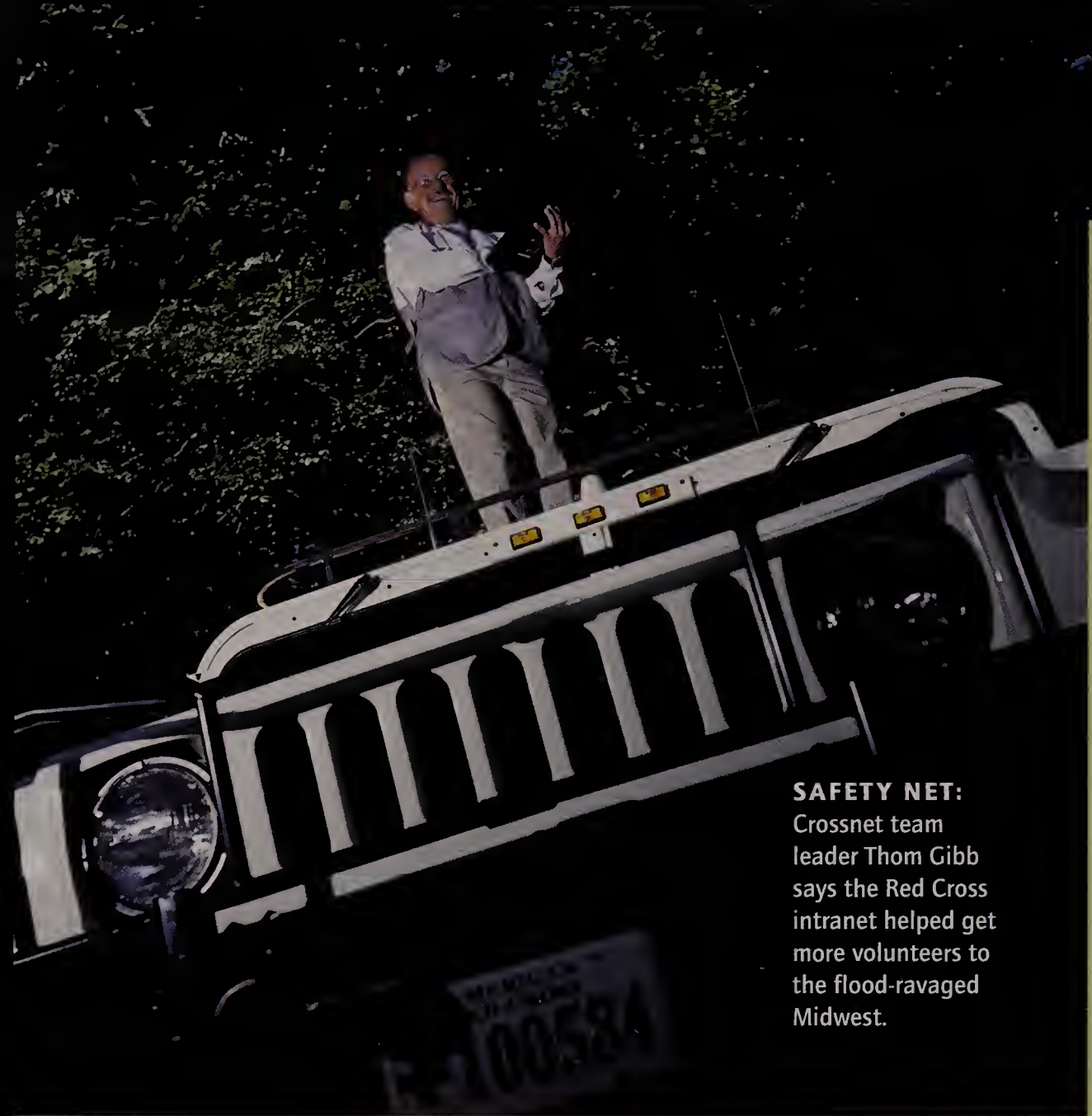
To see how you can solve your own Intranet puzzle, read the MKS white paper entitled "Dark Secrets of the Intranet." For your free copy, call 1-800-265-2797 or point your browser to:
www.mks.com/ad/wm 9708



mks

Managing Change With Integrity

MKS 1-519-884-2251 • France +33 1 3082 2762 • Germany +49 711 16714 0 • Nordic +45 3325 6555 • UK +44 181 948 5166



SAFETY NET: Crossnet team leader Thom Gibb says the Red Cross intranet helped get more volunteers to the flood-ravaged Midwest.

combination of phone, fax and mail. Unlike paper communications, which often are lost, tossed or used for napkins, the intranet posting is there to stay until someone bothers to remove it. And unlike faxes, which can cost 15 to 20 cents a page, intranet postings are free.

That attractive price is what persuaded the organization to stop publishing a paper version of a catalog featuring everything from Red Cross coffee mugs to official lifesaving instructors' manuals. Because the catalog now appears only on Crossnet, the organization will save $100,000 in printing costs alone, says Jennifer Akers, the organization's intranet communication specialist. And that estimate doesn't include the costs of distribution and staff time spent packaging and mailing the paper product.

The bottom line? Akers says in fiscal year 1998 the site—currently maintained by three to five full-time people—should save the Red Cross more than $1 million annually.

Crossnet, which typically receives 2,800 hits a day, also has a busy discussion forum area where staff can exchange ideas about safety instruction and buy, sell or trade safety and training equipment such as computers, training mannequins and two-way radios. If, for example, a Red Cross safety instructor is looking for a way to liven up the swimming and lifesaving course he's taught for the past 11 years, he can hop on the forum and find other instructors who've been there and done that.

Gibb and Akers' next task: Posting emergency disaster plans for all likely disasters for each Red Cross chapter. Those plans not only outline the steps that should be taken in the wake of tornadoes, chemical spills or other possible catastrophes but also refer Red Cross workers to other relief services.

–Art Jahnke

National Aeronautics and Space Administration
Paperless Office
The Paperless Office stores common data in a central area, and online tools make timecard management and statistical analysis less time-consuming. In just one example, a secretary reduced the time spent processing forms from 10 hours a week to two.

NationsBank Corp.
Online Travel Reservation System
This intranet application helps 25,000-plus employees of NationsBank book their own business trips, reducing the burden on the existing in-house travel center.

Nissan Motor Corp. USA
Mr. K's Neighborhood
This intranet marks Nissan's move to savvy, brand-boosting Web sites, beginning with its own employees. This slick site not only saves the company money by eliminating many paper printing and distribution costs but also gives employees fast access to a vast warehouse of corporate information while creating a new internal community.

Northern Telecom Ltd.
Nortel.Access
With 63,000 users and 1.1 million Web pages on 1,200 Web servers, Nortel boasts one of the world's major intranets. Nortel.Access offers designated users a safe, straightforward gateway to confidential documents.

Open Text Corp.
Open Text Livelink Intranet Enterprise (OLLIE)
Software house Open Text uses its intranet as a backbone for smoother workflow and secure document management. Technological gems include per-user, per-object permissions and self-administered directories, allowing departments to publish their own content.

PeopleSoft Inc.
Eureko: The PeopleSoft Knowledge Base
Eureka is woven around a self-help intranet philosophy, empowering employees to find information rather than pushing it down their throats. Focusing mainly on IT and HR issues, the site helps staff solve their own problems using a question-and-answer interface.

PHOTO BY WALTER CALAHAN

www.webmaster.com/

Upgrade Now! APC's Trade-UPS™ Plan boosts Web server power protection

Now you can easily trade in your old UPS for discounts toward enhanced APC protection. Plus, discover the myths and musts of web server protection. See how Smart-UPS® seamlessly integrates with and provides graceful shutdown for major web platforms, including Windows NT and Solaris. The bundled PowerChute plus *WebAgent™ lets users manage their UPS via web browser. Get your FREE handbook today!**

○ **Yes!** I'm interested in trading up an older APC or competitors' UPS to a Smart-UPS. Please send Trade-UPS information.

○ **No,** but I would like a FREE Handbook!

"...Inherent flexibility and excellent software... Don't be caught without one."

Name: _____

Company: _____

Title: _____

Address: _____

_____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

Brand of UPS used? _____ # _____

Brand of PCs used? _____ # _____

Brand of Servers used? _____ # _____

* We regret we cannot fulfill incomplete requests.

Dept. A20

APC®

888-289-APCC x7040

http://www.apcc.com

W-M8/97

©1997, APC. All rights reserved. Smart-UPS, Trade-UPS and SmartSlot are trademarks of American Power Conversion. SU02EBRC. Fax. 401-788-2797. Worldwide: (+1)401-789-0204. PowerFax Literature: 800-347-FAXX.

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 36 WEST KINGSTON, RI

POSTAGE WILL BE PAID BY ADDRESSEE

APC®
AMERICAN POWER CONVERSION

DEPT. BRC-A20
132 FAIRGROUNDS ROAD
PO BOX 278
WEST KINGSTON RI 02892-9920

Our new Smart-UPS® ensures the web hits you *want*... and prevents those you *don't*

Web-enabled PowerChute® *plus* now ships with every Smart-UPS®

Protect ME! APC

Whether you're using the web to sell or support, once you invest in a web server and operating system, you've made a commitment to yourself, your company and your customers. However, without power protection, you risk losing your expensive software, hardware, and data, and the opportunity to interface with new prospects and existing customers. That's why the worlds most reliable power protection is now available to meet your web-based needs.

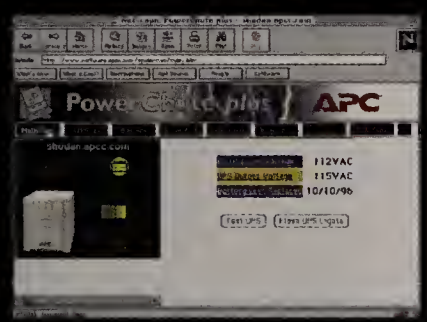
Smart-UPS® ensures your web server is always there, like you promised. Don't become a statistic! Power problems damage hardware, and are the leading cause of data-loss.

APC Smart-UPS ensures protection from surges, spikes and lost power. Backed by a $25,000 lifetime equipment protection guarantee, Smart-UPS brings the confidence of APC to the excitement and opportunity of the Web.

All 120V Smart-UPS now include FREE Web enabled PowerChute *plus* software for safe web server and OS shutdown. PowerChute *plus* protects system and data integrity by automatically shutting down server applications and operating systems.

PowerChute *plus*' FlexEvents™ feature can page you when an out-of-bounds environmental condition occurs. APC's NEW WebAgent™ allows administrators to manage their Smart-UPS via their browser. NEW WebAlert™ notifies users of Web server shutdown.

Instead of increasing your risk by waiting, join over 8,000,000 satisfied computer users worldwide who prefer APC to protect hardware and data.



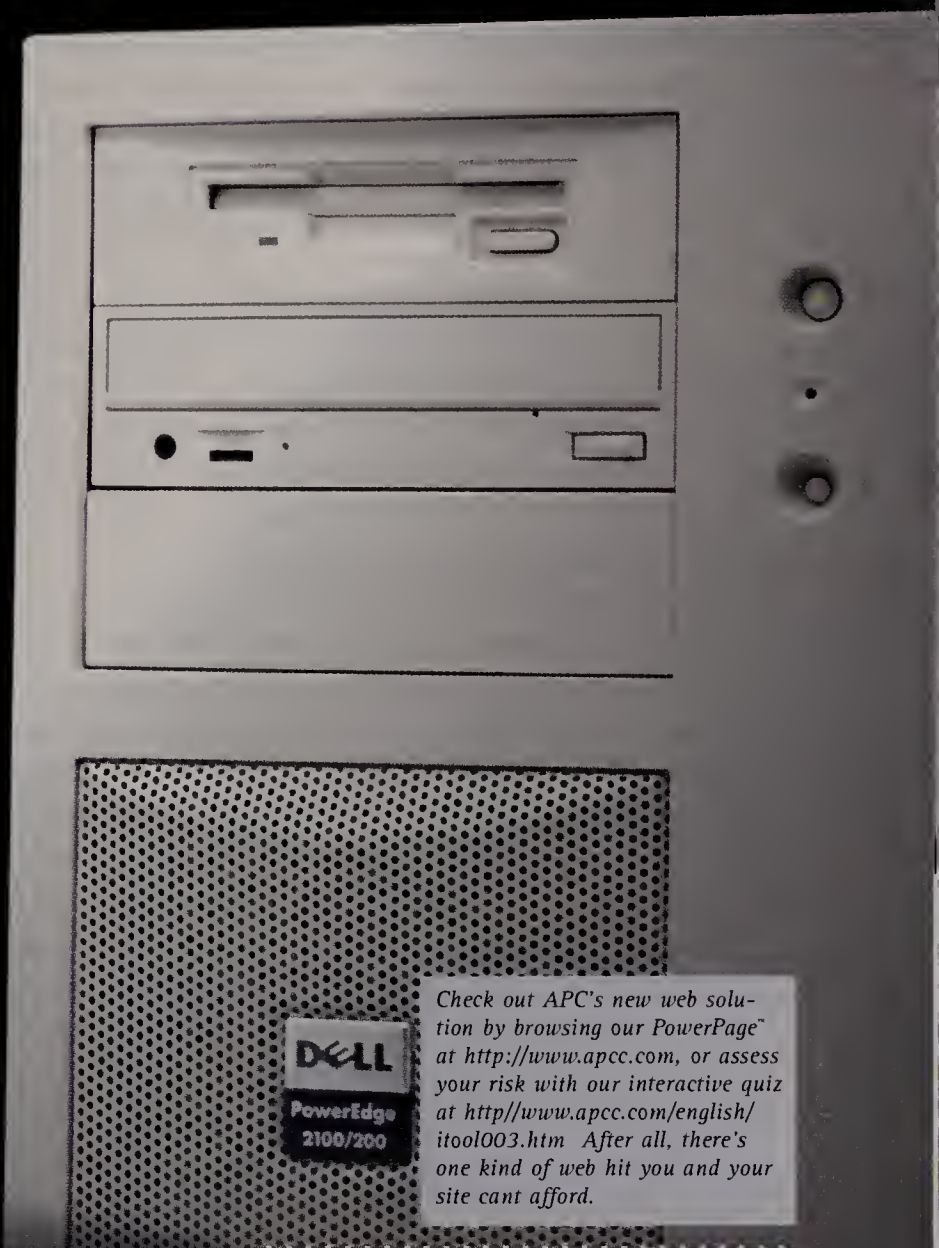
Smart-UPS now ships with PowerChute plus power management software with WebAgent, to make Smart-UPS browser-manageable. (Ships free with 120V Smart-UPS only.)

APC's award-winning Smart-UPS units are available in convenient rack-mount models. The Smart-UPS XL series is recommended for long runtime applications. For maximum protection, ask about our new NetShelter™ premium rack enclosures for all server and internetworking equipment sales.

APC's MasterSwitch™ provides Web /SNMP-manageable, independent control of power to connected loads.

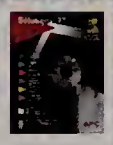
"...inherent flexibility and excellent software. Don't be caught without one"

PC MAGAZINE EDITORS' CHOICE
November 19, 1996
APC Smart-UPS 1000



Check out APC's new web solution by browsing our PowerPage™ at http://www.apcc.com, or assess your risk with our interactive quiz at http//www.apcc.com/english/itool003.htm After all, there's one kind of web hit you and your site cant afford.

To receive FREE information about PowerChute *plus* with WebAgent, just complete this coupon and mail or fax to APC



☐ **YES!** I'd like more information about new PowerChute *plus* software with WebAgent

☐ **NO** I'm not interested at this time but please send my FREE Power Protection Handbook.

Name: _____

Title: _____

Company: _____

Address: _____

_____

City/Town: _____

State: _____ Zip: _____ Country _____

Phone: _____

Brand of UPS used? _____ # _____

Brand of PCs used? _____ # _____

Brand of Server used? _____ # _____

APC®

(888) 289-APCC x7040

Fax: (401) 788-2797 • http://www.apcc.com

Dept. A20

©1997 APC. All Trademarks are the property of their owners. SU02EF • (800)347-FAXX PowerFax • CompuServe: GO APCSUPPORT • 132 Fairgrounds Road, West Kingston, RI 02892 USA

APC has won more awards for reliability than all other UPS vendors combined.

Lab Work

SANDIA NATIONAL LABORATORIES WAS ONE OF THE FIRST ORGANIZATIONS to start an intranet back in 1994, when some engineers began to explore ways to share information internally. That project, Engineering Viewing Environment, quickly evolved into the labwide Enterprise Viewing Environment (EVE), which then formed the foundation of Sandia's internal Web.

Today, Sandia's intranet consists of more than 100,000 documents, 90 percent of which reside on 10 servers, bringing most internal communications, operating procedures, timecards, project materials and some training online to 10,000 employees and contractors. Considering the Net as an enterprisewide resource rather than only as an engineering tool increased the opportunity to use the technology well, says David Leong, the intranet team's co-leader.

"People saw it and realized this was more than a way to share engineering info," Leong says. "It was a way to share enterprise information."

Most of the project's return on investment stems from moving once-manual administrative processes online, says Sandia EVE team spokeswoman Dru Popper-Lopez. For instance, simply converting timecards to a Web-based function freed up three clerks in Sandia's payroll department. Moving the lab's procurement functions online—a project currently underway—will streamline business processes even more.

"We want to prove that intranets can work for large applications for a lot of people at once, and those applications are administrative," she says. "Every application has forced a look at business rules."

The intranet also forces Albuquerque, N.M.-based Sandia to look at the bottom line, which seems to be holding firm. Sandia has saved $100,000 in printing costs alone by moving its weekly bulletin online. More than 30 newsletters also are published on the intranet; most of those no longer appear on paper. In addition, Sandia offers a push subscription service for more than 50 documents, forms and newsletters. When a page or series of pages changes, employees are notified by e-mail. And while it used to take at least a half-hour to set up a meeting in a conference room, the Web-based conference room scheduling system has pared that process to two minutes.

Managed and maintained by a staff of six under the Integrated Information Systems department, Sandia's intranet succeeded in large part because of companywide buy-in and use, Leong says. "It's really became a way of life," he says. "One of the first questions [employees ask about information] is, 'Is it online? Is it on the Web?'"

–Heath Row

Fast Pitch

THE MARITZ INTRANET SITE BEGAN WITH THE HUMBLE GOAL OF serving as an electronic bulletin board where managers could brag about their groups' performance. But within nine months, the site took on another life: It became a warehouse for thousands of HTML pages' worth of company sales experts' know-how, all of which could be easily shared with

Perot Systems Corp.
The Real-Time Associate Information Network (TRAIN)
In the boundaryless organization of Perot Systems, TRAIN proves an important beacon. Going beyond mere phone and mail directories, TRAIN records employees' special skills and project history, making it easier for managers to create stronger teams.

Rockwell Automation/Allen-Bradley Co. Inc.
Milwaukee Quality Information System
With more than 1 million uploads a day, the Quality Information System holds the answer to most questions a Rockwell engineer might ask—and answers are available in real-time. Time devoted to client support has dropped from 80 percent to zero.

Sandia National Laboratories
Sandia National Laboratories' Intranet
At Sandia, the intranet is the primary source of company communication, and Sandia is developing engineering, workflow, parts-sharing and training applications for delivery on the Web.

Sapient Corp.
Sapient's Online Ultimate Resource and Communication Enterprise (SOURCE)
Sapient's SOURCE saves the company an estimated $2.6 million, thanks to reduced paper trails and quicker access to vital information. Engineers easily can reuse code while a push news service keeps staff better informed.

Silicon Graphics Inc.
Silicon Junction
Besides offering the standard corporate news and scheduling functions, SGI maintains an online requisition form, an extranet for manufacturing subcontractors, and human resources and benefits self-service applications. Independently estimated ROI: 1,400 percent.

Software AG Americas Inc.
SAGWEB
All departments and all employees worldwide share information on SAGWEB. Here, anyone in the company can look at benefits information, R&D reports, financial figures, and employee yellow pages saving well over $100,000 a year.

Strong Capital Management Inc.
Strong Funds Intranet
This company uses its intranet to save staff time and hard-copy costs by, for instance, shrinking a 900-person phone list and a list of 1,200 library holdings to one Web page each.

United States Department of Housing and Urban Development
HUD Intranet
This site introduces mini-intranets to each HUD field office and is intended to improve information available to employees and to evaluate distance learning. HUD reports that the site has improved morale and increased productivity.

Unilever Research Laboratory
Biomolecular Information Sciences-Web
BIS-Web was designed to facilitate collaboration among Unilever's worldwide biomolecular research community, Unilever hopes that greater sharing of ideas and collaborative research will get products to market faster.

www.web-master.com

Unisys Corp.
MorketPlace Insider
The MarketPlace Insider indexes and provides quality controls for about 30 Unisys Web servers. Insider improves overall employee efficiency while reducing costs and paper trails.

Unisys Corp.
Unisys Product Information
These intranet pages serve as a conferencing, workflow and promotional site for the Unisys Product Information Department, providing reports on such topics as emerging technologies and the department's best practices.

Unisys Corp.
Unisys Roseville
A local intranet creates a virtual community for 1,500 employees at Unisys' Roseville, Minn., facilities. The site links to corporate information, employees' personal Web sites and a forum starring the local vice president. The site is also the interface for viewing Roseville's ISO 9001 databases.

United States Atlantic Command
USACOM Knowledge Todoy
With this ambitious intranet, the U.S. Atlantic Command has changed the entire learning and knowledge-sharing culture. New information is posted by people in charge of it without running the usual gantlet of official approval. Push technology gives all users the same newsfeed at the same time, regardless of rank.

Weyerhaeuser Co.
Roots
Weyerhaeuser, the largest private land owner in the United States, isn't a high-tech headliner. But its Roots intranet is growing fast, offering improved access to colleagues and customers, better document handling, lower administrative costs and shorter lead times.

Williams & Wilkins
The Wove
The Wave has become a crucial companion for medical publishing house Williams & Wilkins. Every facet of a product's life cycle, from development to marketing, can be tracked on the site. Digitized book covers accompany production schedules, sales reports and an employee database.

At Maritz, an intranet that stores more than 150 sales pitches could save the company 20 percent of its sales research costs.

the rest of the sales force.

Maritz, based in St. Louis, is a diverse company whose primary business is selling sales incentive programs. Hundreds of sales pitches are responsible for Maritz's $2 billion in annual revenues. Sam Ottenlips, vice president of emerging technologies and the site's visionary, says he immediately recognized the site's potential to help Maritz better share and manage its knowledge assets.

"The way it was," says Ottenlips, "a salesperson would call in [to company headquarters in St. Louis] and ask for a pitch for, say, a computer industry company. It would turn out that the expert on that was out of town for three days. Well, that might as well be six years when you're trying to sell a new client."

Using nine people and $150,000, Ottenlips built a solution that changed the way the company sells.

The intranet, dubbed "Let's Talk," houses more than 150 sales pitches. These include about 40 pages of background information on each product being pitched, PowerPoint slide presentations and a set of frequently asked customer questions so that salespeople can "test" themselves before heading out for the kill. All presentations are intended to provide the basics; salespeople customize information and delivery to each client. Still, Let's Talk has allowed the company to essentially mass-customize to save time and money. Though Ottenlips has yet to study the site's full financial benefits, he says he estimates it could save the company up to 25 percent of its sales research costs.

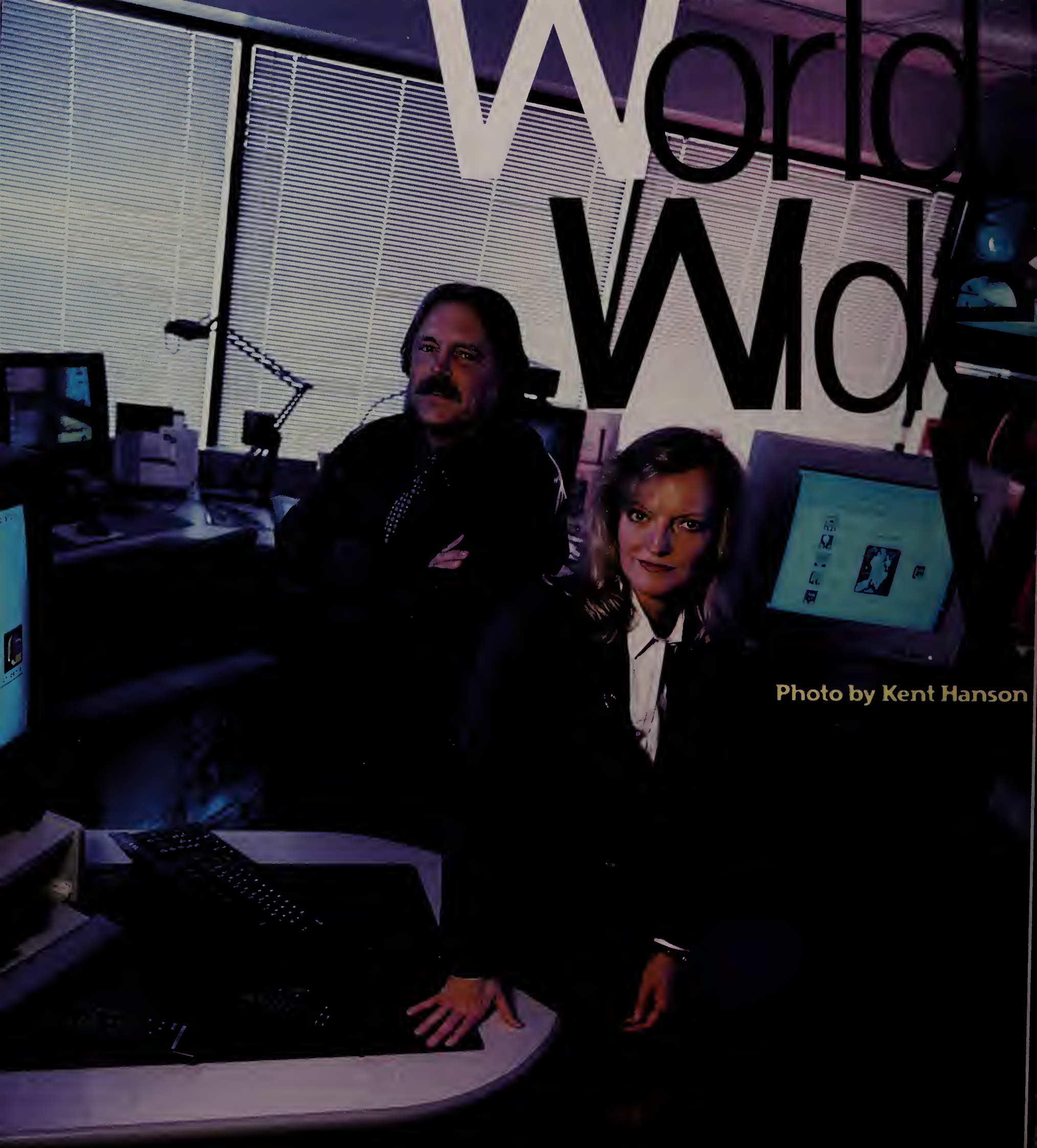
Another impressive feature is the site's link to the corporate library. Researchers preparing presentations can browse library contents online and then request them by clicking a radio button. "The books show up in your office two hours later," Ottenlips says. "That's so simple and yet so powerful." The site has 300 users now, a figure Ottenlips says he expects to reach 2,000 by the end of 1997. Maritz has marketed the site internally by installing kiosks linked to the intranet site and the Internet in common areas such as the company cafeteria.

Future plans for the site include bringing clients into an extranet. For sales-incentive program pitches, Maritz salespeople will be able to give clients access to biographies and sample artwork from more than 300 graphic artists the company employs to design incentive campaigns.

Although the site has changed the way the company sells, Ottenlips says he doubts it will change the culture of the sales force itself.

"We have no plans to have virtual offices, and salespeople don't have to use computers," he says. "Our goal is to make all the people in St. Louis virtual and digital so that the salespeople can remain personal."

–Cheryl Dahle



PACKING THEM IN: Pac Bell's site, under the guidance of Jeff Griffin and Jona Roomian, attracts 120,000 visitors a month.

What can you do with an Internet site? Just about anything. The hard part is doing it as well as the WebMaster 50/50 honorees presented here. Plus, a look under the hoods of a half-dozen winning sites.

Winners

Illustrations by James O'Brien

Directory Assistance

As regional Bell operating companies jockey for position in an increasingly competitive environment, many are turning to new markets in an attempt to differentiate themselves from cookie-cutter competitors. San Francisco-based **Pacific Bell** has risen to the top in several areas. Business unit Pacific Bell Directory (*www.syp.com*) was the first print-directory publisher to devote an entire section to e-mail addresses and URLs. Pacific Bell At Hand (*www.athand.com*), from Pacific Bell Interactive Media, stands out as one of the better regional Net resource guides, and Pac Bell's own Web site (*www.pacbell.com*) provides an awesome example of online marketing done right.

Easily navigable with a clean design, Pac Bell's site focuses on its people and partners, not just its products. The site's goal: to help visitors match services to their personal and business requirements.

Jeff Griffin, Pac Bell's Web manager, says the company wanted to answer questions with more than brochureware. The site lets users sort through several scenarios and match tools to their needs.

Since its launch in August 1996 (a previous iteration hit the Net in '94), Pac Bell's site has attracted roughly 120,000 visitors monthly. It has also sold several thousand products and services—with 60 percent of those sales occurring after normal business hours. Savings and increased rev-

Top 50 Internet Sites

AAA Michigan
www.aaamich.com
In addition to providing dues-paying members with online claim forms, customized route directions and other services, the auto association's AAA Access Web site serves the general public with real-time traffic reports, pothole updates and safety tips. In return, Michigan AAA attracts thousands of travelers, 10 percent of whom purchase AAA services or products online.

American Greetings Corp.
www.americangreetings.com
This site features greeting cards, animated e-mail greetings, flowers, chocolate and stuffed animals—all of which are sold online. American Greetings wins new business, much of it from buyers who are young and male, an all but written off demographic.

American Heart Association
www.americanheart.org
This site pushes the association's primary objective: educating the public to help prevent coronary disease and stroke. Well-designed, information-rich pages organized for intuitive browsing also offer resources for researchers.

American Society of Composers, Authors and Publishers
www.ascap.com
ASCAP's main mission is protecting songwriters' rights, but the comprehensive song database accessible through its Web site helps fans as well as musicians learn what property belongs to which artist. The site offers useful career advice to composers, musicians, authors and publishers.

Apple Computer Inc.
www.apple.com
The computer maker's Web site offers software downloads, product and retail information, and customer support. With about 80,000 pages and 40 million page views a month, its Web presence has taken a big bite out of the traditional labor-intensive customer service process.

Ask the Builder
www.askbuild.com
This online home improvement center maintained by syndicated columnist Tim Carter houses columns and other resources for do-it-yourselfers. Carter, who reports 30,000 page views a month, also sells products and services online. Ads quickly repaid his startup costs.

Cable-Satellite Public Affairs Network (C-Span)
www.c-span.org
The cable network, famous for its beginning-to-end event coverage, expands to the Web. Some content supplements TV coverage, such as program schedules and text of Supreme Court decisions. Other features include RealAudio speech clips and a Congressional glossary.

enues have more than covered the site's costs, says Jona Roomian, director of Web and Internet marketing. Most of its ROI comes from intangibles such as building brand awareness and impressing customers with state-of-the-art Web features, says Roomian.

The Web also has opened new markets to Pac Bell, including indirect sales to companies and clients in the Pacific Rim—customers who might have escaped Pac Bell's radar before the Web. "We've made sizable deals as a result of our Web presence with customers via e-mail," Roomian says. "We might not have known about them otherwise."

–Heath Row

A Class Act

EVERYBODY'S KNOWN TEACHERS LIKE MY TOWN'S "MONITOR MAN," A high school history instructor who earned that nickname because he survived being cooped up with teenagers every day by showing movie after movie all year long. Or like the stuck-in-the-past algebra teacher whose seventh-period class was bearable only if we passed notes.

CCCnet (*www.cccnet.com*) was created with those teachers—and their students—in mind. An endeavor of educational software and services provider **Computer Curriculum**, CCCnet helps teachers bring Internet projects to the classroom. Rather than passively watch a movie about space, for example, students can do online research and interactive projects, chat with NASA scientists, collaborate with other students throughout the world and publish the results in the Student Projects area of CCCnet's Project Zone. Other possible projects include exploring social-class identity through a social-science unit that incorporates an online survey or publishing an electronic student newspaper carrying contributions from kids worldwide.

"Teachers just don't have the time to surf the Net and figure out a curriculum," says Tammy Cunningham, Computer Curriculum's executive producer for new media markets. "CCCnet makes the curriculum for them, integrating textbook, computer and projects for a more holistic learning experience."

For many teachers, CCCnet comes not a minute too soon. Forced to change their teaching styles and lesson plans to accommodate a new nationwide push for objective-based teaching, many struggle to figure out how to proceed.

Computer Curriculum is, of course, a business like any other and hopes to make money as it makes the classroom Internet experience flow smoothly for teachers and students. CCCnet is a natural extension of the company's existing software and CD-ROM products. The site sells site licenses, which enroll an entire school, for $1,600 a year, or individual teachers can enroll their own classrooms for $7.95 a month. Since CCCnet went live in early 1996, more than a handful of site licenses have been sold, and about 7,000 individual teachers have registered, many of whom signed up during free promotional campaigns, says Cunningham. She adds that she expects CCCnet to turn a profit by 1999.

Meanwhile, CCCnet shows us just how much more fun school could've been if we'd grown up just a few decades later.

–Jennifer Bresnahan

Cisco Systems Inc.
Cisco Connection Online
www.cisco.com
This site remains a model for customer self-service, saving the company between $250 million and $400 million this year in paper, distribution and employee costs. Fifty-five thousand registered users help themselves to software patches and advice on the Web rather than phoning Cisco's customer service center.

CMHC Systems Inc.
Mental Health Net
www.cmhc.com
Targeted to consumers and mental-health professionals, this searchable clearinghouse has 6,000 resources. Daily, 5,000 visitors browse the site's news stories, journal articles, discussion forums, surveys, glossaries and referral directories, according to sponsor CMHC Systems, which specializes in mental health-care IT.

Computer Curriculum Corp.
CCCnet
www.cccnet.com
CCCnet helps teachers integrate Internet projects into their curriculum. The subscription-based site also promotes the growth of online educational communities for both teachers and students.

Destination Florida LLC
www.goflorida.com
A standout among regional tourism sites, Destination Florida offers sightseeing information, vacation packages, and online ticketing and hotel-booking capabilities. Traffic increased more than 1,200 percent in the first year.

Drive Inc.
Landings
www.landings.com
Dozens of close-knit conferences and access to federal databases and aviation news keep aviation fans coming back to this free, advertising-supported site.

Duke University Special Collections Library
The Digital Scriptorium
scriptorium.lib.duke.edu/scriptorium
The Digital Scriptorium redefines the role of the academic library by publishing and linking rare historic documents from ancient Egyptian scrolls to Civil War diaries. Far more people visit the Scriptorium's Web pages than its physical building.

www.web-master.com

Eastman Kodak Co.
www.kodok.com
In addition to offering some of the Web's most glorious graphics, Kodak's site posts event and contest schedules, reports on new technologies and provides picture-taking advice on topics such as choosing film and preventing ugly pictures. Call it building the brand, beautifully.

Fairfax County (Va.)
www.co.foirfax.va.us
At this busy civic site, visitors can apply for jobs, get library cards, report missing animals, contact elected officials, reserve tennis courts, get contract bidding information, catch up on missed meetings, see real-time traffic reports and download the county budget in Adobe Acrobat.

Federal Express Corp.
www.fedex.com
The package-delivery service sets standards for customer service online as well as offline. Customers can use the Web site to track packages, find more than 42,000 drop-off locations, request invoice adjustments and download FedEx software. There is heavy traffic here—2 million hits a month—and big savings and increased reach for FedEx.

Florida Department of State
www.dos.stote.fl.us
This site's legislation news and online voter registration soon will be joined by public access to databases covering corporations, property liens, professional licenses and weapons permits. Residents will also find an index to other state agencies and opportunities to comment on state issues.

Gensym Corp.
G2 HelpLink
www.gensym-support.com
G2 HelpLink, a password-protected site that connects customers to the company's help desk, is really a workflow tool that enhances user-vendor collaboration. Features include support-entitlement tracking and support for contract administration.

High Plains Publishers Inc.
High Plains Journal
www.hpj.com
The High Plains Journal is an online newspaper as well as a virtual meeting place for Midwest farmers. Features such as Ag Chat, where farmers share advice and report damage from hailstorms and drought, and a classifieds section with 2,500 ads explain the site's appeal to more than 18,000 users.

Individual Inc.
NewsPage
www.newspoge.com
Every night, Individual Inc.'s NewsPage filters about 20,000 stories from 700 sources to create a personalized business news package for more than 300,000 subscribers.

Industry Innovations Inc.
The Expert Marketplace
expert-morket.com
This site's goal is to match consultants with new clients. Users can advertise their consulting needs, even posting anonymously to prevent a barrage of responses, or they can search

PHOTO BY JOHN NOLLENDORFS

INTERACTIVE GAME: Architect Terry Majewski designed the Nebraska Game and Parks Commission Web site, which has become a model for similar agencies in several states.

Virtual Live Bait

Doug wants to know if a person can carry a canoe into Redtail, a lake listed in his fishing guide as being "walk-in only." Jane's trying to find out if anybody in Nebraska is keeping tabs on mountain lion sightings. Others have questions about bird populations, the coziest campgrounds for families with young children or whether to go after bass with live bait or lures.

While many online forums struggle to keep up the patter about term limits or the economic pros and cons of NAFTA, there seems to be no shortage of opinions about great spots for walleyed pike at one Nebraska site. Welcome to the Outdoor Forum pages of the 1,300-page Web site put together by the **Nebraska Game and Parks Commission** (*www.ngpc.state.ne.us*). Thanks to its Web presence, Nebraska—hardly a contender for the top 10 vacation spots—now gets e-mail from prospective tourists in Japan, Australia and Switzerland.

"When we put the site together in 1994, there weren't many model sites out there," says Commission Engineer and Webmaster Terry Majewski. "I basically just used the tools of graphic design and applied them to the new medium."

Majewski, who trained as an architect and spent 20 years designing campground visitor centers and cabins in Nebraska, became the state Games and Parks Commission's webmaster by default: He was the only person around with training in graphic arts and computer programming, not to mention a surfeit of creative energy. And energy is just what it took. The Game and Parks Commission site was the nation's first state government site devoted to outdoor recreation, and it is widely regarded as a model for other states. As a result, Majewski has been a featured speaker at

national Web conferences and has advised parks and recreation officials from several other states.

With more than 8,000 visitors a week, the site is Nebraska's most popular state government Web stop. It is a wonderfully comprehensive resource for information on parks, wildlife, fishing, boating, camping, hiking, hunting and outdoor education. It also offers a few creative flourishes, such as Turpin Tips in RealAudio format from outdoor radio personality Dick Turpin, who explains the intricacies of "live bait preferences" and offers advice on hunting game birds. And there are far more details than most Web users care to know about the field care of big game: "Avoid cutting into the paunch and intestines by holding them away from the knife with the free hand while guiding the knife with the other."

For a more ecologically conservative audience, the site offers practical functions such as interactive forms that allow site visitors to request permits, brochures and other information; and an online catalog that lets them use credit cards to buy hats, T-shirts and other items. Live ammo is not available.

–Art Jahnke

Driving Forces

THE FOLKS AT THE **PROGRESSIVE COMPANIES** KNOW THAT MANY American drivers would rather have a root canal than deal with an insurance company. So they tried something courageous to make that interaction not just less painful but actually enjoyable.

That effort resulted in the Progressive Web site (*www.auto-insurance.com*), a growing collection of member services, safety tips, consumer information and even entertainment, such as a kids' page and a virtual art gallery tour.

Like many other competitive organizations (and most WebMaster 50/50 winners), Progressive won't share specifics about the site's impact on its business. But officials will say that online traffic has risen at least 10 percent a month since April 1995, and with that growth comes new business opportunities, increased sales and cost savings.

Among the site's most useful features is an automated comparative rate-quoting system, available as of mid-year in 15 states with plans to expand soon into many others. Users enter the standard insurance information, such as type of car and driving record. The online calculator instantly computes rate quotes from Progressive and three competitors. ("We're not always the lowest," admits Webmaster Leslie Youngstrom.) Unlike a similar service Progressive offers through a toll-free telephone number, the option lets users comparison-shop independently.

The site also maintains a find-an-agent database. Searching by city and state, users can retrieve information for up to 10 local Progressive agents, then make a phone call, send a fax, link directly to those agents' sites or send an e-mail inquiry.

While current customers can check policies or pay bills on the Web, people applying for new coverage must still make a phone call to complete the transaction. However, Youngstrom says, Progressive expects to move its whole sales process online, beginning this month with agents in Minnesota.

Meanwhile, all site visitors can get safety tips for packing a road-emer-

a free database of 200,000 experts. The site delivers more than 500,000 page views a month, and, according to parent company Industry Innovations, it makes money

Intuit Inc.
Quicken Financial Network
www.quicken.com
Intuit's comprehensive Quicken Financial Network provides information on personal money matters. By offering services such as BankNOW, stock quotes, retirement plans and smooth TurboTax 1040EZ online calculation, Intuit hopes to turn casual visitors into paying customers.

iPrint Inc.
www.iprint.com
The first Web-only print shop, iPrint lets customers create and order their own business cards, labels or letterheads. Self-service keeps prices down, and electronic payments ensure lean administration and low transaction costs.

Kaman Music Corp.
www.kamanmusic.com
Visitors can scout the Kaman virtual store, chat with like-minded people, indulge in demos and promotions, or simply listen to instruments that Kaman sells. The company projects revenues from increased sales and substantial cost savings from reduced catalog mailings.

Leighton & Co.
www.leightonreps.com
Leighton & Co., which represents commercial illustrators, has increased sales and lowered advertising costs by putting art samples online in a format that's easy to navigate.

Marshall Industries
www.marshall.com
Marshall Industries' site displays an impressive assortment of computer hardware and components. Customers can place orders as well; if your item's not in stock, you'll learn when it's expected. For Marshall, customer support costs are greatly reduced.

Microsoft Corp.
Expedia
expedia.msn.com
Microsoft's travel-site entry generates more than $1 million in weekly transactions, guides users through the hotel-airline reservation maze at no cost and is open 24 hours a day. How does your travel agent compare?

National Association of Printers and Lithographers
NAPL Profit Connection
www.napl.org
This graphic arts trade group's site offers a private financial benchmarking tool, a searchable database of suppliers, industry publications and six industry-specific interactive forums. Additional services are available to dues-paying members.

Nebraska Game and Parks Commission
www.ngpc.state.ne.us
What about the Lepisosteus platostomus? The Nebraska Game and Parks Commission hosts this large and informative site on hiking, fishing and wildlife in the state. With more than 8,000 visitors a week—including many from outside the state (and country)—it's the most popular government site in Nebraska.

www.web-master.com

Northwestern Mutual Life Insurance Co.
www.northwesternmutual.com
Content is diverse, including advice on when to start saving for college tuition and the Insurance-Speak Glossary, which decodes the industry's lingo. For Northwestern, it delivers sales leads and has a reputation as a helpful partner.

Pacific Bell
www.pacbell.com
Pac Bell helps customers match telephone services to their personal and business requirements by sorting through several scenarios. The site attracts more than 120,000 monthly visitors and has sold several thousand products online, mostly outside normal business hours.

Pennington Hardwoods of Indiana
www.aye.net/~pennwood
The user-friendly site lets customers order online, learn about lumber products and calculate transport mileage and foreign-currency conversion.

Powell's Books Inc.
www.powells.com
The largest independent bookstore has made its database accessible via the Web, allowing customers to browse through listings for more than 1 million new, used and out-of-print books. Result: a marketplace that extends far beyond the store's Pacific Northwest base and sells 10,000 books a week.

Progressive Companies
www.auto-insurance.com
This site offers safety tips, a database of insurance agents, and links to recall information, state and federal agencies and consumer groups. Users can get comparative rate quotes from the company and up to three competitors.

Reynolds Metals Co.
www.rmc.com
This encyclopedia of aluminum tells users more than they ever thought they wanted to know about aluminum's history, preparation and many uses. The big surprise: It's interesting.

Rosenbluth International Inc. Travelution
www.rosenbluth.com
Rosenbluth's Travelution site melds good navigation and design with content highlights such as airport maps and a Shockwave audio language translator. The site, which sells travel services, maintains user profiles for corporate clients. Results: new markets and cost savings.

gency kit, preventing car-jacking and using a cellular phone without causing a pileup. Wondering about recalls? Type in the year, make and model of the car, and the site retrieves the bad news from the National Highway Traffic Safety Administration database.

Progressive also has links to other insurance-related organizations, including state insurance commissions, consumer groups and an industry association that links to other insurers. Why in heaven's name would an insurance company provide users with direct access to regulators, watchdogs and competitors? It's part of the high-trust, one-stop service approach, Youngstrom says. "If [site visitors] have a continued problem with us—or with any insurer—we want to help."

–Anne Stuart

By the People, For the People

FAIRFAX COUNTY, VA., HAS ONE SIMPLE OBJECTIVE FOR ITS WEB SITE: to let anybody anywhere do almost any kind of business with local government, 24 hours a day.

Simple, yes. Easy, no. The county is home to roughly 1 million people, 65 percent of whom own PCs and modems. Many work in nearby high-tech companies; others are employed in technology-intensive federal jobs in the nation's capital. This savvy audience has above-average expectations for the quality and quantity of its local government service. Particularly online. And while many municipal sites solely serve residents, Fairfax County (*www.co.fairfax.va.us*) targets businesses, too. Plus, it's all done with three part-timers.

In meeting those challenges, Fairfax County achieves two goals that Ray Herold, manager of microcomputer application services for the county and the site's administrator, cited in his WebMaster 50/50 application form: "using technology to do more with less" and providing "a government without walls."

Fairfax County laid the groundwork for its Web site four years ago with a dial-up bulletin board system, and following that, a telephone information system. In mid-1996, the county concentrated its interactive efforts on the Web, where users run errands that once required treks to the offices of the approximately 30 county agencies now online. Besides providing the standard maps, announcements, directories, events schedules and e-mail feedback forms, the Fairfax County site lets visitors do the following:

- Download an 88-page citizens handbook that, unlike its hard-copy annual counterpart, is updated constantly.
- Get real-time traffic views via a link to Traffic Video Now.
- Obtain summaries of County Board of Supervisors meetings since 1992. (Online summaries from other county government boards are in the works.)
- Seek and apply for county jobs.
- Apply for a library card. (Hundreds of residents have used the service, some before it was advertised. "They had somebody come in about two

COUNTY LINES: Ray Herold runs the Fairfax County Web site, where visitors can reserve a tennis court or look at photos of dogs and cats up for adoption.

hours after it went up and apply for cards for a whole family," Herold says.)

- Report a missing animal or view photos of dogs and cats available for adoption.
- Reserve public tennis courts.

"Vendors and companies wishing to do business with the county can go to our purchasing site and not only see what solicitations we have on the street but download directly the WordPerfect document with the details," Herold says. And anyone can get the county budget in Adobe Acrobat.

The next step, within a year, is to collect tax payments and tuition for community adult education classes via the Web.

Despite mushrooming to more than 2,000 pages, the site remains straightforward, emphasizing ease of navigation over flashy graphics.

While the county has no solid savings figures, Herold credits do-it-yourself Web options with streamlining staff time, cutting copying costs and reducing postage. And, he adds, several pets have found new homes with families who first spotted them online.

–Anne Stuart

Silicon Graphics Inc.
Silicon Surf
www.sgi.com
This site's license fulfillment system, Key-O-Matic, has generated about 30,000 evaluation licenses; the online product catalog has booked nearly $800,000 in U.S. orders; and the Contact Me page is credited with generating more than $2.5 million in revenues. We rest our case.

Software AG Americas Inc.
www.sogus.com
Distribution of demos via Software AG's marketing and customer support site has helped the company save about $300,000 a year. Meanwhile, online sales leads have produced nearly 900 new deals.

ST Publications Inc.
SignWeb
www.signweb.com
Targeting the sign industry, this ad-supported resource center helps users advertise, interact, procure goods and services, get trade news and access a wealth of sign-related reference materials. And it's got a bit of attitude, too.

Star Tribune
www.stortribune.com
The Star Tribune offers one of the most solid online news services. More than 50,000 users visit weekly to read up on local news, hunt for bargains in the classifieds, debate in chat rooms, play games or view satellite weather images.

Switchboard Inc.
www.switchboard.com
The site's mission statement says it all: helping people find people. Speedy search engines conduct 5 million searches weekly, compiling information from phone, mail and e-mail directories. Supported by ad and online-postcard sales, Switchboard also includes a business directory.

Texas Instruments Inc.
www.ti.com
Texas Instruments seems to have found an ideal forum for customer interaction. During peak seasons, online requests save TI up to $1 million daily by reducing traffic at the customer-call center. Savvy features include a TI calculator test page, a personalized news service and interactive surveys.

Ticketmaster Corp.
www.ticketmaster.com
With listings of more than 20,000 events nationwide, links to the company's network of ticket centers and fully fledged transactional capabilities online, this site provides a perfect new entry point for Ticketmaster's business. Benefits include lower distribution costs.

Trade Compass
www.tradecomposs.com
This online database records official U.S. customs records for import and export companies. Subscribers can use the site for general information or competitive intelligence, finding out, for instance, what their competitors shipped to particular countries in a given month.

Union Pacific Railroad
www.uprr.com
Using the giant railroad's Web site, suppliers can track invoices, customers can track equip-

PHOTO BY WALTER CALAHAN

www.web-master.com

INTERNET COMMERCE EXPO

INTERNET COMMERCE • INTRANETS • EXTRANETS

Los Angeles

September 8-11, 1997

Los Angeles Convention Center

Because it's not business as usual any more.

Your future is tied to doing business on the Internet and the World Wide Web. Internet Commerce, Extranets and corporate Intranets have changed the world of business as we know it. Whether you're a vendor with an Internet solution for the Enterprise... or a corporate decision maker looking for productivity enhancing products, you need to be at ICE.

For Exhibitors: a proven to deliver event.
Thousands of corporate buyers will be there looking for the new products and services that make Intranets, Extranets and Internet commerce practical and secure.

For Attendees: the coolest way to find the hottest Internet solutions.
Leading Internet vendors and solution providers will show you how to increase productivity and profitability using the latest Internet technology.

Join your peers at this business-critical Expo and Conference.

ICE℠ INTERNET COMMERCE EXPO
INTERNET SOLUTIONS FOR THE ENTERPRISE

IDG
An International Data Group Company

Sponsored by:

IBM · Microsoft · Pen Market · CommerceNet · Deloitte & Touche Consulting Group · Oracle · Netscape · Unisys · Virtual Resources · Demo

Sponsoring publications:

CIO · WebMaster

www.idg.com/ice

ICE, Internet Commerce Expo, and Internet Solutions for the Enterprise are service marks of International Data Group.

Please put me on ICE! I would like more information on: ○ Exhibiting ○ Attending

WM

Name_____

Title_____

Company_____

Address_____

City/State/Zip_____

Phone_____ Fax_____

e-Mail_____

111 Speen Street, P.O. Box 9107, Framingham, MA 01701.

Phone: 800-667-4ICE (4423) Fax: 508-370-4325

The Right Track

A railroad's top priority is making sure the trains run on time. So it's no surprise that Webmaster Tom Gerber makes the same commitment to regularly refreshing the site he oversees for **Union Pacific Railroad** *(www.uprr.com)*.

"Before we went live, we felt we needed one critical thing," Gerber recalls of the site's December 1995 launch. "That was content that changed daily.

We knew we didn't have a lot of business content, but we wanted people to come back," Gerber says. "As we added new features and new content over time, they did."

In fact, they now come back often enough to rack up 175,000 page views per month.

Convinced that their efforts at timeliness are paying off, Gerber and his staff update parts of Union Pacific's site *(www.uprr.com)* every business day with news releases, bulletins on agriculture, shipping and energy topics, equipment for sale and a lengthy Customer Update section answering questions about Union Pacific's 1996 merger with Southern Pacific Railroad.

There's plenty of interactivity, too. Suppliers can track their own invoices. Customers can use an automated public price-inquiry system to calculate shipping prices for a diverse list of items, including appliances, livestock, newsprint and grain. Previously, they called customer service representatives who thumbed through stacks of binders several feet high to collect data—often out of date—on pricing structures and tariffs.

But the Web team seems proudest of its equipment-tracing system, which, like the UPS package-tracking system, lets customers determine exactly where on Union Pacific's 36,000 miles of track their shipment is located. In pre-Web days, they would have telephoned customer service or used an electronic data interchange package.

The clean, user-friendly design is deceptively spare: The site houses more than 2,000 documents, including a comprehensive historical section with great old photos, railroad facts and figures, and a company time line dating back almost 150 years. By using the Web effectively, Union Pacific has saved itself from buying boxcars of paper formerly used for records, schedules, tables, faxes, correspondence, reports and other documentation. Fax and postage costs have decreased as well. Customers who used to telephone for locomotive rosters, historical records or public information now go straight to the Web. That saves employees so much time that the communications department has reduced staff and other departments have been able to avoid staffing increases.

Finally, the company—created by an act of President Lincoln to provide the eastern half of the transcontinental railroad—is making money from marketing nostalgia online. Upon arrival, train buffs should make tracks for the company store, where they can buy more than 100 railway items, including engineers' caps, lanterns, toy locomotives and a musical snow dome that plays "Great Big Rollin' Railroad."

–Anne Stuart

ment or get news updates, potential customers can calculate shipping costs, and railroad buffs can view historic photos or buy memorabilia. The railroad reports dramatic time savings.

United States Environmental Protection Agency
Envirofacts Warehouse
www.epo.gov/enviro/index.html
The EPA's site links to its Envirofacts data warehouse, providing the public with a single source for agency information about air pollution levels, water-discharge permit compliance, Superfund sites, toxic chemicals and hazardous waste-handlers.

United States Geological Survey
www.usgs.gov
Visitors to the USGS public service site use its 4 million pages to learn how to minimize the loss of life and property from natural disasters. Government officials and private citizens rely on the site for real-time data on floods, volcanoes and earthquakes.

United States Postal Service
Web Interactive Network of Government Services (WINGS)
www.wings.gov
The WINGS site provides integrated services from state, local and federal governments, helping consumers change addresses, find jobs, check on Social Security benefits, get small-business information, research bills and laws, and tour the Smithsonian Institution virtually.

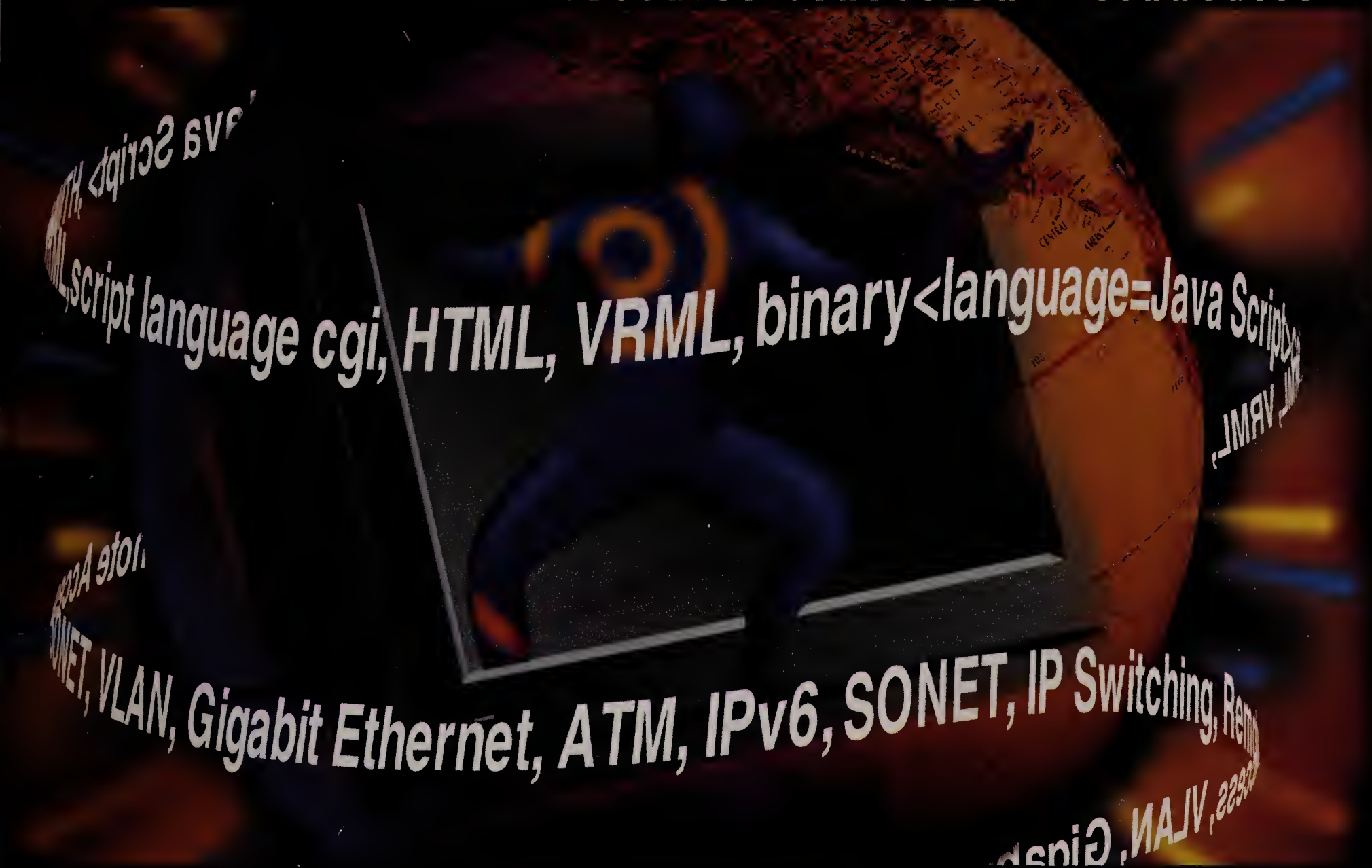
The Tenagra Corp./de Jager & Co. Ltd.
The Year 2000 Information Center
www.yeor2000.com
This site, sponsored by The Tenagra Corp. and de Jager & Co. Ltd., serves as a clearinghouse for information, advice, warnings and referrals to vendors and specialists on the year 2000 crisis. Includes an up-to-the-minute countdown to the Big Moment.

Wilder Group LLC
Innvest: America's Hotel On-Line Superstore
www.innvest.com
This information-packed site for the lodging industry offers information on franchising, education, news and jobs. Sponsor-supported Innvest also provides access to 15,000 hotel-related vendors, lists properties for sale and calculates mortgages.

www.web-master.com/

See new networking standards in motion.

GENERAL CONFERENCE • SECURITY SYMPOSIUM • COMMUNITY



TUTORIALS • WORKSHOPS • EXHIBITION

World's #1 Networking Forum

Step inside NetWorld™+Interop®—the world's largest interactive learning center for mission-critical networking solutions. In only days you can learn how to deploy the most advanced networking, Internet and intranet technologies on the planet. NetWorld+Interop has the expert knowledge and training you need to unleash a new generation of cutting-edge applications. Ones that give your organization the agility, power and flexibility to move forward—faster.

Atlanta, Georgia
Georgia World Congress Center
October 6–10, 1997

For Registration/Information:
1-800-962-6513
Int'l 415-372-7079
www.interop.com

SOFTBANKforums
NETWORLD™ +INTEROP®

Tomorrow's Technologies In Action

See and test the technologies that will run your enterprise 2 years from now. NetWorld+Interop builds and manages the most diverse, enterprise-class, multivendor network in the world: the InteropNet™. Connecting over 600 top vendors to the Internet, the InteropNet lets you evaluate the newest standards in networking, live on the exhibition floor. This is your one chance to see emerging technologies at work, so do not get caught standing still. Pre-register to attend now.

1997 SOFTBANK Forums. Interop is a registered trademark and InteropNet is a trademark of SOFTBANK Forums. NetWorld is a service mark of Novell, Inc. All other names are the property of their respective holders. DPI7ESPA

A Letter To Our Readers

really flexible business models

WEBMASTER Magazine was born more than two years ago with at least the murky understanding that change is not only constant and, of course, a great adventure but also sometimes merciless and not always a lot of fun. We—like our readers, article subjects and advertisers—have striven to anticipate and adapt to the flow of the mercurial Web, trying not just to go with it but to stay a healthy few days, or even weeks, out in front.

***WebMaster* Launch Issue**
June/July 1995

***WebMaster* Final Issue**
August 1997

From the beginning, we have sought to produce a magazine that would target business executives, with roots in every function, who see in the Web the promise of innovation, business transformation, and added profit and productivity. We have also firmly believed in the great potential of webmasters to be big thinkers and important collaborators in this complex, challenging and exciting business revolution.

The validation we've received from readers—at all levels and in all shapes and sizes of enterprises—has been most heartening from the start. And we sincerely thank you. There is obviously a great need and appetite for the kind of information and insight we've worked so hard to provide. Many advertisers, too, have stepped forward to support us, recognizing the solid value proposition that *WebMaster* and its pioneering readers clearly represent.

But this is still a young marketplace. Many of the most exciting and promising Web technology ventures are relatively cash-strapped when it comes to their marketing programs. They are—and rightly so—pouring most of their resources into developing products and services that will meet potential customers' most pressing needs. In a publishing niche that is crowded with eager competitors, too many Web-devoted print and electronic magazines are now chasing too few advertising dollars. And that's a fact.

Moreover, our very name has increasingly caused us perceptual difficulties in the marketplace, making it hard for us to clearly establish our (to us, at least) obvious differentiation. For better or worse, the role of the corporate webmaster tends to be perceived (and, I would argue, misperceived) as largely low-level, technical and tactical rather than high-level, broad, strategic and business-focused. Despite the demonstrable caliber of the *WebMaster* readership and our high-level editorial focus on Web-enabled business opportunities, we have competitively been lumped in with publications that target the community of Web programmers and develop-

ers and offer more technically focused content. This is what's known in the trade as a positioning problem: Our name—which we are proud to wear—has become a competitive liability.

We have been tempted to continue to argue the point, letting our content speak for itself and defining webmastery in ways that are as exalted as this transforming business revolution demands. But we are also realists: In publishing, being too far ahead of your time is not often a winning strategy. Instead, what we needed was a really flexible business model.

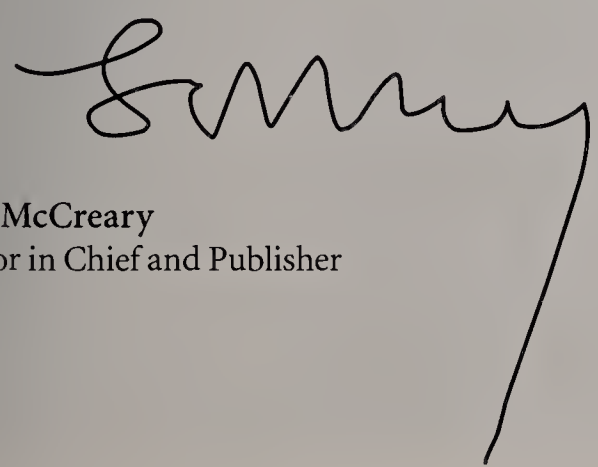
So, beginning in October, you will find exactly the kind of high-level business information you've been accustomed to reading in *WebMaster* packaged as the second section of CIO Communications Inc.'s flagship publication, *CIO* magazine. It will be called *CIO Web Business*, and it will be a separately bound section mailed to all *CIO* subscribers. (To apply for a free subscription to *CIO*, please visit a special Web page created for *WebMaster* readers: *www.cio.com/subscribe/wmreaders.htm.*)

CIO Web Business will arrive with the first-of-the-month issues of *CIO*. With the mid-month issues, *CIO* subscribers will receive a second section titled *CIO Enterprise*, which will focus on the cross-functional process of deriving the maximum business benefit from the broad panoply of technology investments and strategies. As *WebMaster* has always done, those two sections will portray the efforts of visionary business leaders to create new value and competitive advantages through the smart pursuit of technology-enabled business opportunities.

The *WebMaster* name will continue to have a home within CIO Communications as an online resource quartered within CIO's Web site (*www.web-master.com*). It will target the varied technology and business information needs of webmasters and Web developers.

We who have written for, edited, designed and produced this first iteration of *WebMaster* magazine have been awed and exhilarated by the work of the past two-plus years. In particular, this final "Phase I" issue, celebrating the WebMaster 50/50, is a crowning artifact of the business potential inherent in the Web. We are proud of this issue and proud of the winning entrants. And we are also justly proud of the magazine we developed and have continued to evolve since the first issue appeared in June 1995.

It bears repeating that we are deeply grateful to our readers and advertisers for all your support, and we hope that all of you will follow us to our new incarnation. We also wish you the greatest possible success and fulfillment in your own pursuit of flexible business models. Please continue to keep us posted at *mccreary@cio.com.*



Lew McCreary
Editor in Chief and Publisher

As *WebMaster* has always done, *CIO Web Business* and *CIO Enterprise* will portray the efforts of visionary business leaders to create new value and decisive competitive advantages through the smart pursuit of technology-enabled business opportunities.

WEBMASTER/CIO OFFICES

President and Group Publisher
JOSEPH L. LEVY
508 935-4601

Senior VP/Sales
MICHAEL J. MASTERS
973 244-5510

EAST COAST

Regional Director/Advertising Sales
FRANK S. GENOVESE
973 244-5505

District Manager/Advertising Sales
EILEEN P. LOBAUGH
973 244-5507

Advertising Sales Associate
STACY G. GREIMEL
973 244-5519

Advertising Sales Associate
JOAN BONADEO
973 244-5511

Advertising Sales Associate
JANET B. LILOIA
973 227-1140, FAX 973 227-1565

NEW ENGLAND

Regional Manager/Advertising Sales
LEN GANZ
508 935-4039

Advertising Sales Associate
TIM LEONARD
508 935-4092, FAX 508 872-0618

SOUTH CENTRAL

Regional Manager/Advertising Sales
ROBERT E. SAWDON

Advertising Sales Associate
SOUNTHALY OUTHAVONG
512 306-9801, FAX 512 306-9805

NORTH CENTRAL

Regional Manager/Advertising Sales
KEITH H. KENNER
847 441-3143

Advertising Sales Associate
ANNE SWARTZ
847 441-5005, FAX 847-441-5150

WEST COAST

Regional Director/Advertising Sales
GERALD E. PARSONS
415 693-1987

Regional Manager/Advertising Sales
RICHARD BASTAS
415 693-1988

Regional Manager/Advertising Sales
JAMES BARRETT
415 693-1995

Advertising Sales Associate
JODY J. NAGY
415 693-1993

Advertising Sales Assistant
HEATHER O'CONNOR
415 398-8200, FAX 415 398-4649

LIST SERVICES

List Services Manager
STEPHANIE LEGELIS
508 935-4433

List Services Coordinator
KATHRYN A.W. GRAYSON
508 935-4072
800 859-5478, FAX 508 872-8506

List Services Assistant
AMY McCABE
508 935-4151

For further sales information, visit our Web site at
www.cio.com/marketing/salesoffices.html.

WEBMASTER

Page numbers refer to the first page of the article(s) in which the company is mentioned. This index is provided as a service to readers. The publisher does not assume any liability for errors or omissions.

Company Index

AAA Michigan 52
Allen-Bradley Co. Inc. 18, 42
American Greetings Corp. 52
American Heart Association 52
American Red Cross 42
American Society of Composers, Authors and Publishers 6, 52
Apple Computer Inc. 6, 42, 52
Art Department, The 6
Ask the Builder 52
AT&T Corp. 18, 42
Black & Veatch 18, 42
Boeing Commercial Airplanes 42
Cabletron Systems Inc. 42
Case Shiller Weiss Inc. 42
Century Computing Inc. 18
CH2M Hill 42
Chubb Corp., The 42
Cisco Systems Inc. 14, 24, 42, 52
CMHC Systems Inc. 24, 52
Computer Curriculum Corp. 24, 52
C-Span 6, 52
de Jager & Co. Ltd. 14, 52
Destination Florida LLC 6, 52
Drive Inc. 6, 52
Duke University Special Collections Library 6, 24, 52
Eastman Kodak Co. 14, 52
Eastman Software Inc. 42
E.I. du Pont de Nemours and Co. 28
Electronic Arts 42
Exide Electronics Group Inc. 18, 42
Fairfax County (Va.) 52
Federal Express Corp. 24, 52
Florida Department of State 6, 52
Ford Motor Co. 18, 42
GE Capital Corp. 36, 42
General Electric Co. 36
Gensym Corp. 52
Hagler Bailly Inc. 42
Hewlett-Packard Co. 42
High Plains Publishers Inc. 52
IMI Systems Inc. 36
Indiana University/Purdue University Indianapolis 42
Individual Inc. 52
Industry Innovations Inc. 52
Informix Software Inc. 42
Internet Travel Network 14
Intuit Inc. 24, 52
iPrint Inc. 24, 52
Jupiter Communications LLC 28
Kaman Music Corp. 52
KN Energy Inc. 42
Lee Printwear 42
Legg Mason Inc. 42
Leighton & Co. 24, 52
Leon County (Fla.) Schools 42
Lockheed Martin Enterprise Information Systems 42
Luella Hannan Memorial Foundation 42
Maritz Inc. 42
Marshall Industries 24, 52
MCI Communications Corp. 18, 42
Microsoft Corp. 24, 28, 52
Motorola Inc. 18, 36, 42
NASA 6, 42
Nat'l Assn. of Printers and Lithographers 6, 52
NationsBank Corp. 42
Nebraska Game and Parks Commission 52
Nissan Motor Corp. USA 42
Northern Telecom Ltd. 18, 42
Northwestern Mutual Life Insurance Co. 24, 52
Open Text Corp. 42
Pacific Bell 52
Pacific Bell Interactive Media 52
Pennington Hardwoods of Indiana 24, 52
PeopleSoft Inc. 42
Perot Systems Corp. 18, 42
Powell's Books Inc. 24, 52
Progressive Companies 52
Reynolds Metals Co. 52
Rosenbluth International Inc. 24, 28, 52
Sandia National Laboratories 42
Sapient Corp. 42
Silicon Graphics Inc. 24, 42, 52
Software AG Americas Inc. 42, 52
ST Publications Inc. 6, 52
Star Tribune 52
Strong Capital Management Inc. 42
Switchboard Inc. 52
Tenagra Corp., The 14, 52
Texas Instruments Inc. 52
Ticketmaster Corp. 14, 52
Trade Compass 52
U.S. Atlantic Command 18, 42
U.S. Department of Housing and Urban Development 42
U.S. Environmental Protection Agency 6, 52
U.S. Geological Survey 6, 24, 52
U.S. Postal Service 52
Unilever Research Laboratory 18, 42
Union Pacific Railroad 52
Unisys Corp. 18, 42
Wayne State University Institute of Gerontology 42
Weyerhaeuser Co. 18, 42
Wilder Group LLC 6, 24, 52
Williams & Wilkins 18, 42

Advertiser Index

American Power Conversion 49
Bluestone Inc. C3
BMC Software Inc. 23
Centura Software Corp. 41
CIO Communications Inc. 16A, 17, 35
Computer Associates Intl. Inc. C2
Hewlett-Packard Co. 9
IBM Corp. 32
ICat Corp. 11
Internet Commerce Expo 59
Microsoft Corp. 3
Mortice Kern Systems Inc. 47
Prosoft 12
Sarrus Software Inc. 15
Softbank Forums 61
USWeb Corp. 3, C4
UUNet Technologies Inc. 5

WebMaster is a publication of International Data Group, the world's largest publisher of computer-related information and the leading global provider of information services on information technology. International Data Group publishes over 275 computer publications in over 75 countries. Sixty million people read one or more International Data Group publications each month. International Data Group's publications include: **Argentina:** Buyer's Guide, Computerworld Argentina, PC World Argentina; **Australia:** Australian Macworld, Australian PC World, Australian Reseller News, Computerworld, IT Casebook, Network World, Publish, Webmaster; **Austria:** Computerwelt Osterreich, Networks Austria, PC Tip Austria; **Bangladesh:** PC World Bangladesh; **Belarus:** PC World Belarus; **Belgium:** Data News; **Brazil:** Annuário de Informática, Computerworld, Connections, Macworld, PC Player, PC World, Publish, Reseller News, Supergamepower; **Bulgaria:** Computerworld Bulgaria, Network World Bulgaria, PC & MacWorld Bulgaria; **Canada:** CIO Canada, Client/Server World, ComputerWorld Canada, InfoWorld Canada, NetworkWorld Canada, WebWorld; **Chile:** Computerworld Chile, PC World Chile; **Colombia:** Computerworld Colombia, PC World Colombia; **Costa Rica:** PC World Centro America; **The Czech and Slovak Republics:** Computerworld Czechoslovakia, Macworld Czech Republic, PC World Czechoslovakia; **Denmark:** Communications World Danmark, Computerworld Danmark, Macworld Danmark, PC World Danmark, Techworld Denmark; **Dominican Republic:** PC World Republica Dominicana; **Ecuador:** PC World Ecuador; **Egypt:** Computerworld Middle East, PC World Middle East; **El Salvador:** PC World Centro America; Finland: MikroPC, Tietoverkko, Tietoviikko; **France:** Distributique, Hebdo, Info PC, Le Monde Informatique, Macworld, Reseaux & Telecoms, WebMaster France; **Germany:** Computer Partner, Computerwoche, Computerwoche Extra, Computerwoche FOCUS, Global Online, Macwelt, PC Welt; **Greece:** Amiga Computing, GamePro Greece, Multimedia World; **Guatemala:** PC World Centro America; **Honduras:** PC World Centro America; **Hong Kong:** Computerworld Hong Kong, PC World Hong Kong, Publish in Asia; **Hungary:** ABCD CD-ROM, Computerworld Szamitastechnika, Internetto Online Magazine, PC World Hungary, PC-X Magazin Hungary; **Iceland:** Tolvuheimur PC World Island; **India:** Information Communications World, Information Systems Computerworld, PC World India, Publish in Asia; **Indonesia:** InfoKomputer PC World, Komputek Computerworld, Publish in Asia; **Ireland:** ComputerScope, PC Live!; **Israel:** Macworld Israel, People & Computers/Computerworld; **Italy:** Computerworld Italia, Macworld Italia, Networking Italia, PC World Italia; **Japan:** DTP World, Macworld Japan, Nikkei Personal Computing, OS/2 World Japan, SunWorld Japan, Windows NT World, Windows World Japan; **Kenya:** PC World East African; **Korea:** Hi-Tech Information, Macworld Korea, PC World Korea; **Macedonia:** PC World Macedonia; **Malaysia:** Computerworld Malaysia, PC World Malaysia, Publish in Asia; **Malta:** PC World Malta; **Mexico:** Computerworld Mexico, PC World Mexico; **Myanmar:** PC World Myanmar; **Netherlands:** Computer! Totaal, LAN Internetworking Magazine, LAN World Buyers Guide, Net, Macworld Netherlands, WebWereld; **New Zealand:** Absolute Beginners Guide and Plain & Simple Series, Computer Buyer, Computer Industry Directory, Computerworld New Zealand, MTB, Network World, PC World New Zealand; **Nicaragua:** PC World Centro America; **Norway:** Computerworld Norge, CW Rapport, Datamagasinet, Financial Rapport, Kursguide Norge, Macworld Norge, Multimediaworld World Norway, PC World Ekspress Norge, PC World Nettverk, PC World Norge, PC World ProduktGuide Norge; **Pakistan:** Computerworld Pakistan; **Panama:** PC World Panama; **People's Republic of China:** China Computer Users, China Computerworld, China InfoWorld, China Telecom World Weekly, Computer & Communication, Electronic Design China, Electronics Today, Electronics Weekly, Game Software, PC World China, Popular Computer Week, Software Weekly, Software World, Telecom World; **Peru:** Computerworld Peru, PC World Profesional Peru, PC World SoHo Peru; **Philippines:** Click!, Computerworld Philippines, PC World Philippines, Publish in Asia; **Poland:** Computerworld Poland, Computerworld Special Report Poland, Cyber, Macworld Poland, Networld Poland, PC World Komputer; **Portugal:** Cerebro/PC World, Computerworld/Correio Informático, Dealer World Portugal, Mac*In/PC*In Portugal, Multimedia World; **Puerto Rico:** PC World Puerto Rico; **Romania:** Computerworld Romania, PC World Romania, Telecom Romania; **Russia:** Computerworld Russia, Mir PK, Publish, Seti; **Singapore:** Computerworld Singapore, PC World Singapore, Publish in Asia; **Slovenia:** Monitor; **South Africa:** Computing SA, Network World SA, Software World SA; **Spain:** Communicaciones World Espana, Computerworld Espana, Dealer World Espana, Macworld Espana, PC World Espana; **Sri Lanka:** Infolink PC World; **Sweden:** CAP&Design, Computer Sweden, Corporate Computing Sweden, Internetworld Sweden, it.branschen, Macworld Sweden, MaxiData Sweden, MikroDatorn, Nätverk & Kommunikation, PC World Sweden, PC/Aktiv, Windows World Sweden; **Switzerland:** Computerworld Schweiz, Macworld Schweiz, PCtip; **Taiwan:** Computerworld Taiwan, Macworld Taiwan, NEW ViSiON/Publish, PC World Taiwan, Windows World Taiwan; **Thailand:** Publish in Asia, Thai Computerworld; **Turkey:** Computerworld Turkiye, Macworld Turkiye, Network World Turkiye, PC World Turkiye; **Ukraine:** Computerworld Kiev, Multimedia World Ukraine, PC World Ukraine; **United Kingdom:** Acorn User UK, Amiga Action UK, Amiga Computing UK, Apple Talk UK, Computing, Macworld, Parents and Computers UK, PC Advisor, PC Home, PSX Pro, The WEB; **United States:** Cable in the Classroom, CIO Magazine, Computerworld, DOS World, Federal Computer Week, GamePro Magazine, InfoWorld, I-Way, Macworld, Network World, PC Games, PC World, Publish, Video Event, THE WEB Magazine and WebMaster; online webzines JavaWorld, NetscapeWorld and SunWorld Online; **Uruguay:** InfoWorld Uruguay; **Venezuela:** Computerworld Venezuela, PC World Venezuela; and **Vietnam:** PC World Vietnam.

Editorial, Advertising and Business Offices: 492 Old Connecticut Path, PO Box 9208, Framingham, Massachusetts 01701-9208, (508) 872-0080. Postal Information: *WebMaster* (ISSN 1091-0743) is published monthly by CIO Communications Inc., 492 Old Connecticut Path, PO Box 9208, Framingham, MA 01701-9208. Periodicals postage paid at Framingham, MA, and at additional mailing offices.

Reprints: Copyright 1997 by CIO Communications Inc. All rights reserved. Reproduction of material appearing in *WebMaster* is forbidden without written permission. Send all reprint requests to Permissions Department, *WebMaster*, 492 Old Connecticut Path, PO Box 9208, Framingham, MA 01701-9208.

Subscriptions: Address inquiries to *WebMaster*, 492 Old Connecticut Path, PO Box 9208, Framingham, MA 01701-9208; 800 788-4605. *WebMaster* is free to qualified executives. To all others, the one-year basic rate is $29.97 for U.S. and Canada, $65 to foreign countries (prepaid in U.S. funds only). The single copy price is $4.95. Please allow 4 to 6 weeks for new subscriptions to begin. Change of Address: Please fax a copy of current subscription label along with new address to (508) 879-7899. Allow 4 to 6 weeks for change to take effect. Postmaster: Send change of address to *WebMaster*, PO Box 3044, Northbrook, IL 60065-9608.

www.web-master.com/

A worldwide Intranet data warehouse? Eli Lilly won't wait.

"Sapphire/Web is exceptionally robust and easy to use. Its ability to generate C code makes our job easy and doesn't require us to conform to a proprietary tool."

Dave Baker
Project Leader,
HR Systems
Eli Lilly Corporation

To develop Web applications TODAY, they use Bluestone's Sapphire/Web.

How do you provide access to thousands of pages of information? Vital information that people around the world need to do their jobs?

Eli Lilly, one of the world's largest pharmaceutical companies, needed to give its top HR management access to a huge data warehouse of personnel information. They wanted a simple, point and click system to track key employees from 65 global affiliates—putting resumes, photos, bios, compensation data and other critical information online.

What tool did they use ?

Sapphire/Web® from Bluestone®.

Only Sapphire/Web lets you build Web-based client/server applications in UNIX or Windows (NT or '95) using a comprehensive set of visual tools. Point and click, and Sapphire/Web binds your database—including its native SQL, stored procedures, existing functions, executables, files and even legacy systems—to front-end Web forms. So Internet or Intranet applications come to life quickly and easily.

Enough talk. With Sapphire/Web, you can get started today. You might wait, but the Web won't.

- **Visual: easy to use for novices, yet powerful enough for large development teams.**
- **Open: works with any Web editor, server and browser; integrates with Java, JavaScript, ActiveX and VRML; keeps pace with changing Web technology.**
- **Robust: generates C and C++ for the ultimate in power, performance and portability.**

Start today! Download Sapphire/Web FREE!

Get more information or an evaluation copy at **http://www.bluestone.com.** Or call **(609) 727-4600.** We'll also send "The Web Won't Wait"—which profiles other Sapphire/Web fans like META Group, KPMG and Open Market.

Sapphire/Web

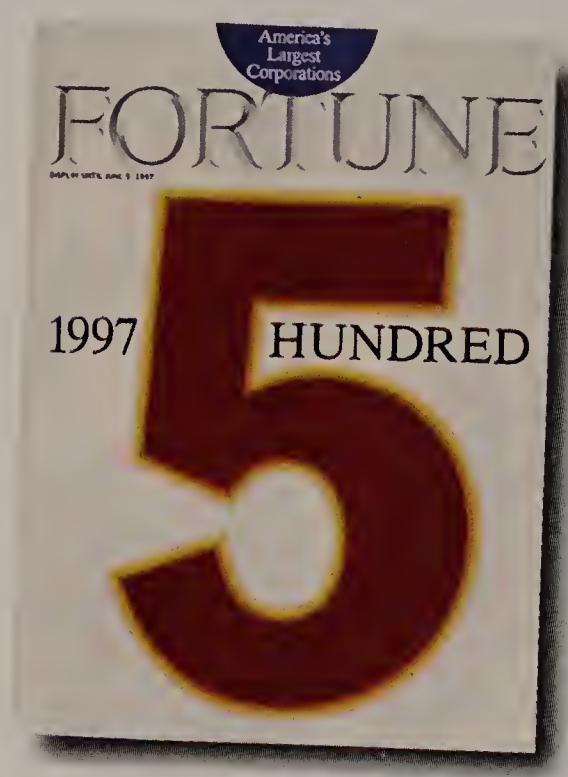
The Web won't wait.

Bluestone

© Bluestone, Inc. 1996. Sapphire/Web and Bluestone are registered trademarks of Bluestone, Inc.
All other products mentioned are trademarks of their respective companies.

Where you can find some of the solutions we've created.

Business success stories on the Internet.



Where you can find some of our clients.

Few companies have deployed Internet and Intranet strategies that are successful business solutions. At USWeb, we've created hundreds of customized solutions for a diverse range of clients, including *Fortune 500*® and *Fortune 1000*® companies such as Northwestern Mutual Life and Harley-Davidson, as well as companies like Haworth Corporation, Catalina Marketing and Bigelow Tea.

USWeb is a leading international company dedicated to delivering powerful Internet and Intranet solutions for your business-critical needs. With more than 50 offices nationwide, we deliver comprehensive services, including initial consultation, strategic and architecture planning, site design, application development, hosting and site marketing. Finally, there's a name you can turn to that's as solid as the clients we work for. So let us put our expertise to work in building an Internet or Intranet solution that meets your business objectives. To receive our free guide entitled *50 Ways to Put an Intranet to Work*, visit our site at www.usweb.com/fortune19 or call 1-888-USWEB-411, ext. 353.

USWEB™

A STRATEGIC PARTNER FOR THE INFORMATION AGE.™

©1997 USWeb Corporation. USWeb, the USWeb logo and "A strategic partner for the information age" are trademarks of USWeb Corporation. All other company and product names are registered trademarks or trademarks of their respective holders.